Banner Performance Reporting and Analytics
ODS Overview Training Workbook

February 2007
Release 3.1

SUNGARD HIGHER EDUCATION

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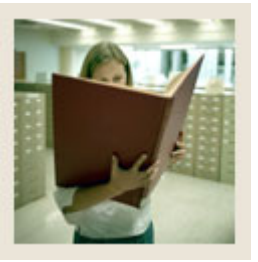

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Section A: ODS Overview

Lesson: Overview

Jump to TOC

Workbook goal

The objective of this workbook is to provide the participants with an understanding of information within the ODS, and enough introductory experience using it so that they are able to successfully support ad hoc operational reporting needs as appropriate from the ODS.

Workbook objectives

Upon completion of this course, you will be able to:

- answer the question “What is the ODS and how does it get built?”
- understand the relationship between ODS administration and report writing
- navigate knowledgeably through the ODS metadata
- develop a reporting strategy.

Intended audience

- Department Functional/Technical Staff - Internal designated report writers
- Department Managers, IT Department Support Staff - responsible for report writing.

Section A: ODS Overview

Lesson: The Information Pyramid

Jump to TOC

Information: The Common Component

Information is needed to address performance obligations. Information and institutional intelligence is also required for measurable performance improvements.

Information is need by	To
Executives	monitor progress towards institutional priorities
Administrators	monitor daily operations
IT	provide enterprise intelligence and production reports
IR	monitor institutional trends, compliance

In order to achieve their institutional mission, colleges and universities must define their business objectives to address and combat these pressures, such as:

- increase operational efficiency – maintain costs
- maximize funding – respond timely and appropriately to ensure revenue opportunities, i.e., governmental reporting, grant applications, etc.
- optimize accountability – legislative reporting, accreditation, budgetary reporting
- increase competitive positioning – institutional rankings, align curriculum to constituents' demands

The common component to these and other objectives is timely access to the information that is needed to achieve these objectives.

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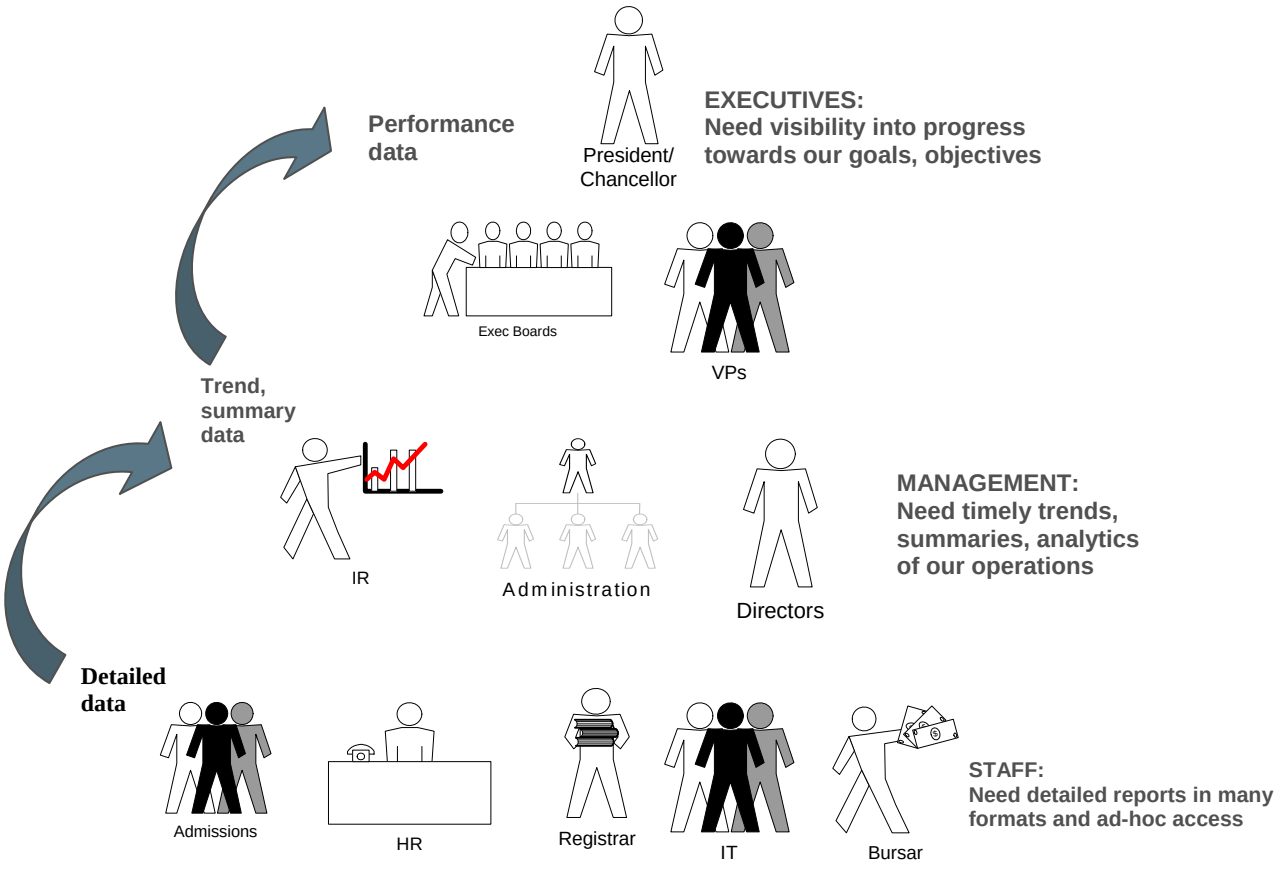
Section A: ODS Overview

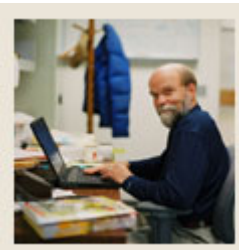
Lesson: The Information Pyramid (Continued)

Jump to TOC

The information pyramid

- Information needs to reach all levels of campus.
- Data from lower levels must be transformed to upper levels.





Section B: Developing a Reporting Strategy

Lesson: Developing a Strategic Reporting Plan

Jump to TOC

Strategic Reporting Team

The strategic reporting team is responsible for managing the expectations of the reporting community. They will make recommendations on who should have access to "what" data, who the department/school experts are, etc. This team manages the decision-making process and is the conduit between executive needs and end-user supplying those needs. It is typically chaired by institutional research head.

- **Strategic Reporting Team Members**
  - ODS Administrator – usually from IT
  - Reporting Tool Administrator
  - Key Report Writers
  - End Users
  - Key Administrators – The people who have a broad knowledge of the university and the ability to make or escalate key decisions regarding reporting on campus
  - IT Representative

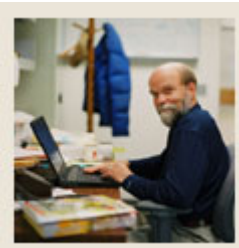
- **Strategic Reporting Team Responsibilities**
  - Manage expectations of reporting community
  - Make recommendations on access
  - Assist IT group with decision-making involving end users and executives

ODS Administrators

This is a role of someone at the institution who manages the Operational Data Store. This person reviews the logs to make sure no errors were encountered in the nightly refresh or load. The institution may decide that this is a role of their DBA, but it is not normally an end-user activity. In some instances, this person is responsible for data freezing, or managing the data as it goes to outside agencies, such as the state. Usually, this is an IT position.

The Administrator should be familiar with the technical aspects of the Banner system as well as the Oracle Warehouse Builder. The end user should have a basic understanding of the Banner system, the ODS, and their third-party reporting tool.

- **ODS Administrator Responsibilities**
  - Manage the ODS (loads, refreshes, security, metadata)
  - Review logs and checks for errors
  - Freeze views



Section B: Developing a Reporting Strategy

Lesson: Developing a Strategic Reporting Plan (Continued)

Jump to TOC

Identifying Experts
Organizational Experts are responsible for data and assist with design of reports.
When developing your reporting strategy, you need to ask the following questions:

- Who has responsibility for reporting tool expertise?
- Who do the users call to get help designing a report?
- Who do they call to get training in the product?
- Who are the experts that will do the following:
  - Develop the business requirements?
  - Information content experts
  - Report Writer experts

Department training
SunGard Higher Education does not provide reporting tool training as a part of the ODS Training since it is tool independent. The purpose of this training workbook is to show the reports, not to teach them how to write them.

Note: SunGard Higher Education can provide specific tool training, but that is a separate request.

- **Department Training**
  - Who will be responsible?
  - When will training occur?

Planning for Upgrades
Sungard HE ODS Clients on maintenance will get periodic/upgrades. Scheduled upgrades will be tracked on the Banner Performance Reporting and Analytics Product Calendar and may include new composite tables and or columns, new reporting views, new report templates. It may, also, include technical upgrades.

Enhancements can come from these areas:

- Client Enhancements
- Technical upgrades related to Oracle enhancements
- Internationalization
- Third Party Products
- Banner Product/Database enhancements

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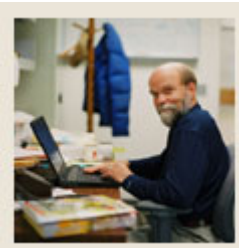

Section B: Developing a Reporting Strategy

Lesson: Developing a Strategic Reporting Plan (Continued)

Jump to TOC

Identifying Users

Your strategic reporting plan should also identify specific user groups, their reporting needs and ability to generate their own reports. While IT team members can do many reporting tasks, each functional area should develop their own power user for ad hoc reporting. This strategy makes the functional area less dependent on IT resources.

- **Who are the users?**
  - Power users – ad hoc
  - Business users - managed
  - Casual users – directed
  - IT – complete

Report Writing 101

1. All Report Requests Should Be In Writing. (This forces the requestors to organize their thoughts. They should include the following information in their requests. You determine the format!)
2. How often will this report be used and by whom? (routine vs. ad hoc)
3. Is the person authorized to have this information? (security)
4. What's the true "drop-dead date" it's needed by? (deadline)
5. How will the information be used? (purpose)
6. What data should be on the report, in both rows and columns? (specifications)
7. How are the data to be selected? (criteria)
8. How should the data be sorted and grouped? (filter)
9. How should the final output be displayed? (format)

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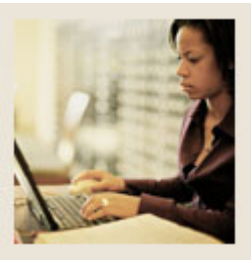

Section C: What is the ODS?

Lesson: ODS Introduction

Jump to TOC

Introduction

The Operational Data Store (ODS) allows your institution to accumulate vast amounts of data that, when properly aggregated, contain valuable information on institutional performance. Ideally, your institution would transform this data into information and knowledge that can be used to support your decision-making processes.

The Operational Data Store (ODS) gathers information from existing data sources, creates consistent reporting definitions and reports, and presents the information. Using this solution, your institution can take full advantage of the data stored in your source system by turning it into applied knowledge that can help you make informed decisions, guide strategic institutional planning, forecast based on analysis of historical trends, and enhance institutional performance.

ODS key features include:

- ODS tables are constructed specifically for reporting.
- ODS resides on a separate reporting Server.
- ODS is populated from the source system (s) using composite views.
- ODS has de-normalized* tables called composite tables.
- Interactive Metadata.

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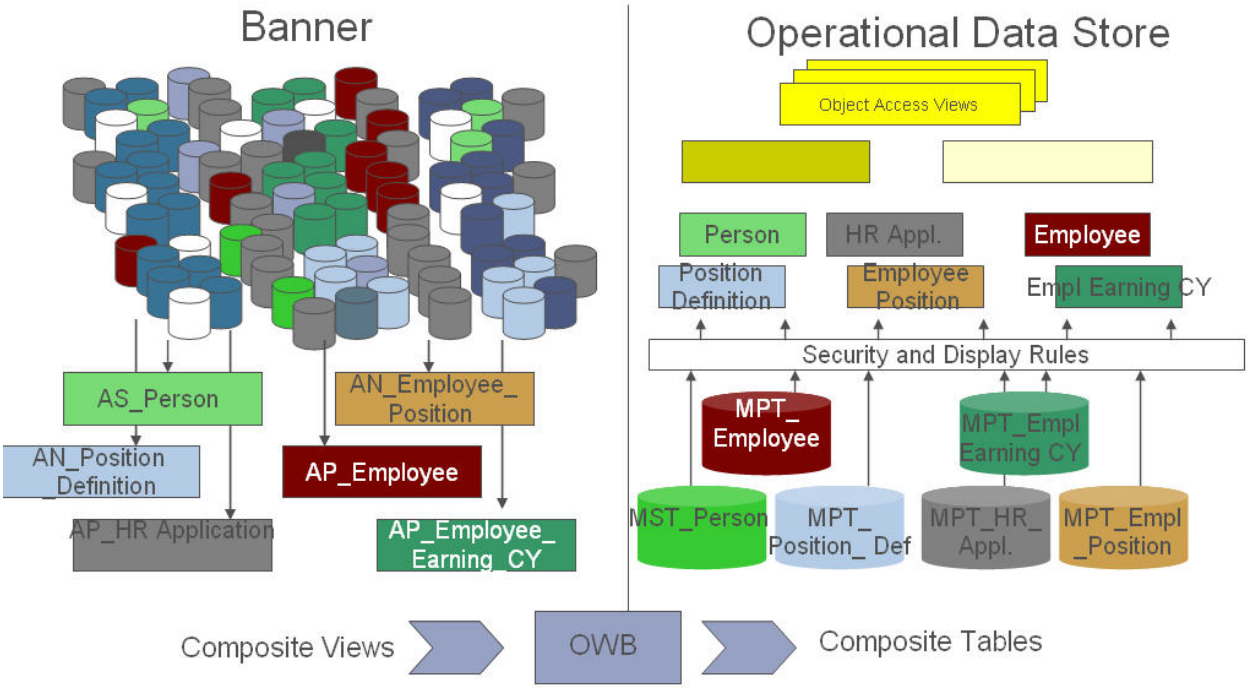
Section C: What is the ODS?

Lesson: ODS Architecture and Design

Jump to TOC

ODS Architecture and Design



This diagram shows how to extract information from administrative systems, reorganize information into a simplified format, and then store the information in a separate database instance where end users can create and deploy operational and ad hoc reports.

The information is restructured to provide a more extensive and flexible data store. The ODS provides business organized reporting views with fewer columns and improved performance. These reporting views offer a more compact alternative to the existing Object:Access views.

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Section C: What is the ODS?

Lesson: Exercise – Tracking a Data Column

Jump to TOC

Exercise: Tracking a Data Column from Banner to the ODS

The purpose of this exercise is to demonstrate the ODS architecture.

10 signs are printed on 8 ½ X 11 card stock with two holes punched at the top. String is fed through the holes so that each sign can be hung around a person's neck.

An example of what is on the10 signs for the Student module is:

1) Mission: Track a Student's Major from Banner to the ODS
2) Banner Form Name: SGASTDN
3) Banner Column Name: SGBSTDN_MAJR_CODE_1
4) Banner Table Name: SGBSTDN
5) Banner Composite View Name: Academic Study
6) Oracle Warehouse Builder: Extracts, Transforms and Loads Banner Tables to produce:
7) ODS Composite Table Name: Student
8) Security and Display Rules Applied via ODS web administration
9) ODS Reporting View Name: Academic Study
10) ODS View Column Name: Major

One sign is given to 10 participants. They are then asked to stand up and read what's on their sign. Signs are numbered at the bottom so correct order can be maintained.

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Section C: What is the ODS?

Lesson: Oracle Warehouse Builder

Jump to TOC

Introduction

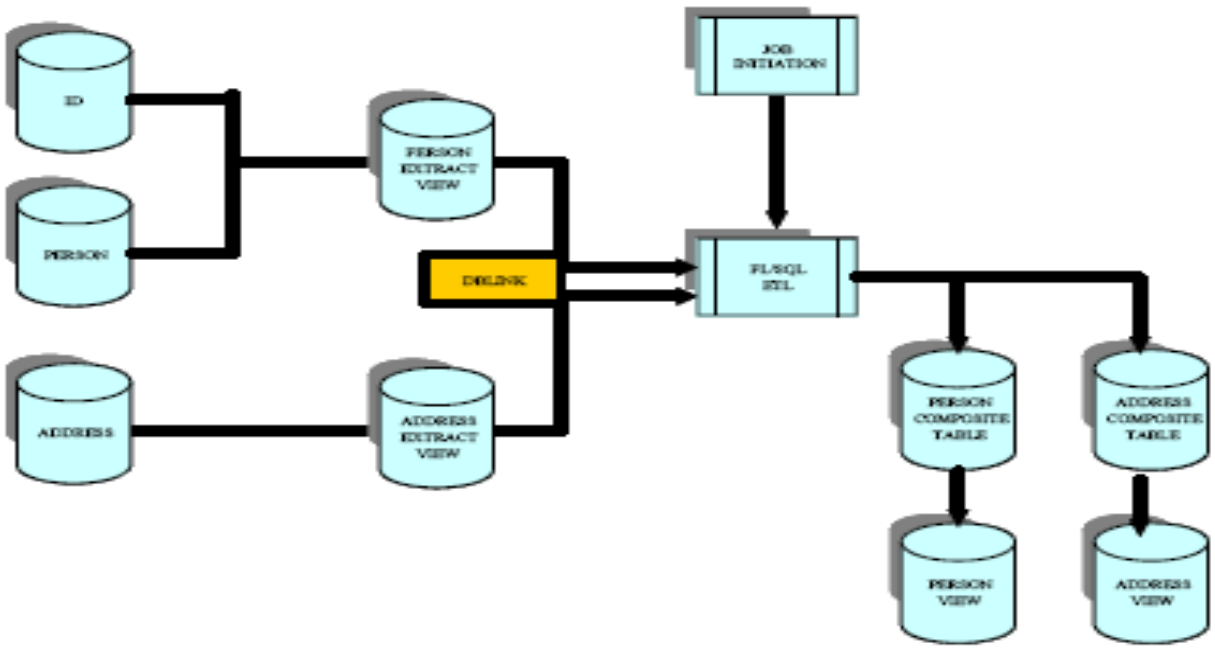
The Oracle Warehouse Builder allows you to design a complete logical model of your warehouse. It helps to plan how to EXTRACT data from the source, TRANSFORM the data, and configure the data for LOADING into the data warehouse. That's what we call it ETL – Extract, Transform, Load.

When to load and update data

- Initial Load
- Refresh data in ODS on a regular basis
  - Nightly? Weekly?
- Update specific area as needed when there is a data change in source system.

Note: SunGard Higher Education recommends that the ODS be updated on a daily basis.

ODS load process flow

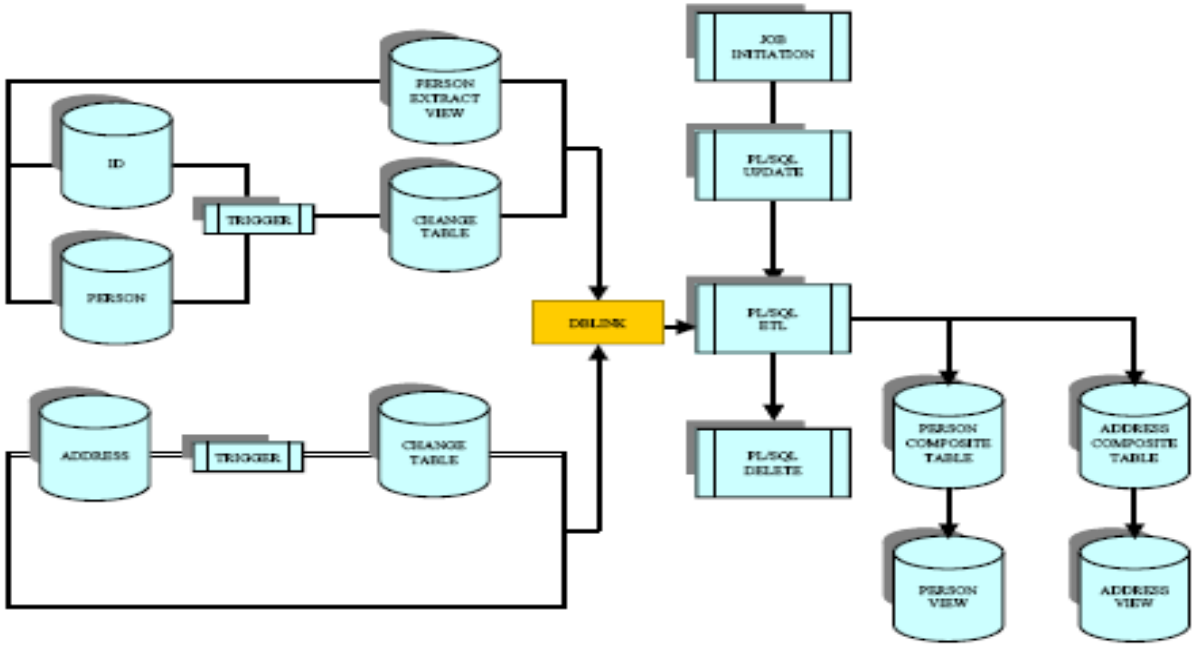


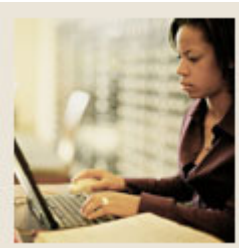
Section C: What is the ODS?

Lesson: Oracle Warehouse Builder (Continued)

Jump to TOC

ODS incremental refresh process flow





Section C: What is the ODS?

Lesson: ODS Naming Conventions

Jump to TOC

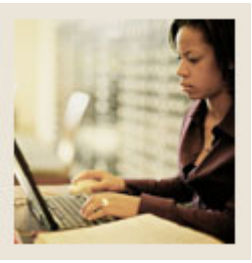
Introduction

Use the following ODS naming conventions.

- **SunGard Higher Education Banner**
  - Composite view – Ax_name
  - Object:Access view – Ax_name

- **SunGard Higher Education Operational Data Store**
  - Database tables – MxT_name
  - Reporting views – English name reports
  - Subset of Reporting views – English name_SLOT
  - Object:Access view – Ax_name

Note: x = Module identifiers are (T) Accounts Receivable, (A) Advancement, (G) General, (F) Finance, (R) Financial Aid, (P) HR, (S) Student



Section C: What is the ODS?

Lesson: Tables and Views

Jump to TOC

Introduction

The Operational Data Store is a database of de-normalized tables called composite tables. These composite tables store data contents from the administrative systems and are **constructed specifically for reporting**. De-normalizing combines data from many smaller tables into fewer, larger tables. This enhances data extraction and query access by eliminating the need to perform excessive table joins.

Populated from source system (Banner)

Data is retrieved from the source system(s) using composite views. These views utilize the existing business logic on the source system and provide the extraction logic for the composite tables that reside on the reporting server.

Separate server

An ODS typically resides on a separate server in order to take advantage of the performance benefits associated with a query-only system. Business logic does not reside on the reporting server to ensure that the ODS model can support all SunGard Higher Education products. Because the ODS is a query-only system, the data in the ODS flows only one way — from Banner, PowerCAMPUS, Plus, and Matrix to the ODS, never from the Operational Data Store to the administrative system.

The ODS standard composite tables were created with your business needs in mind. This enables you to create your own reporting views and/or reports based on the delivered tables. The ODS also includes Reporting (presentation) views. Reporting views are the final views that you will use to create reports.

Additional features

- ODS reporting views provide access to the data and allow the creation of operational and ad hoc reports.
- Through the Administrative Interface
    - Data security can be set
    - Display rules can be maintained
- ODS tables and reporting views were constructed with the business needs of higher education administration in mind.

Section C: What is the ODS?

Lesson: De-normalized Database

Jump to TOC

Normalized database

Banner is an example of a normalized database. Normalized databases are great for data entry.

Some features of normalized databases include:

- Eliminate duplicative columns from the same table.
- Create separate tables for each group of related data and identify each row with a unique column or set of columns (the primary key).
- Remove subsets of data that apply to multiple rows of a table and place them in separate tables.
- Create relationships between these new tables and their predecessors through the use of foreign keys.
- Remove columns that are not dependent upon the primary key.

De-normalized database

A de-normalized database like the ODS is a copy of the source database that has been optimized for reporting. Remember, de-normalizing combines data from many smaller tables into fewer, larger tables. This enhances data extraction and query access by eliminating the need to perform excessive table joins.

For instance, the Banner User ID, First Name, Middle Name, and Last Name may appear in a single table in Banner (a normalized database) but it would appear in every view in the ODS that uses that information so that fewer joins are required. The advantage of de-normalized data is that columns of data can be found in more than one view.

Section C: What is the ODS?

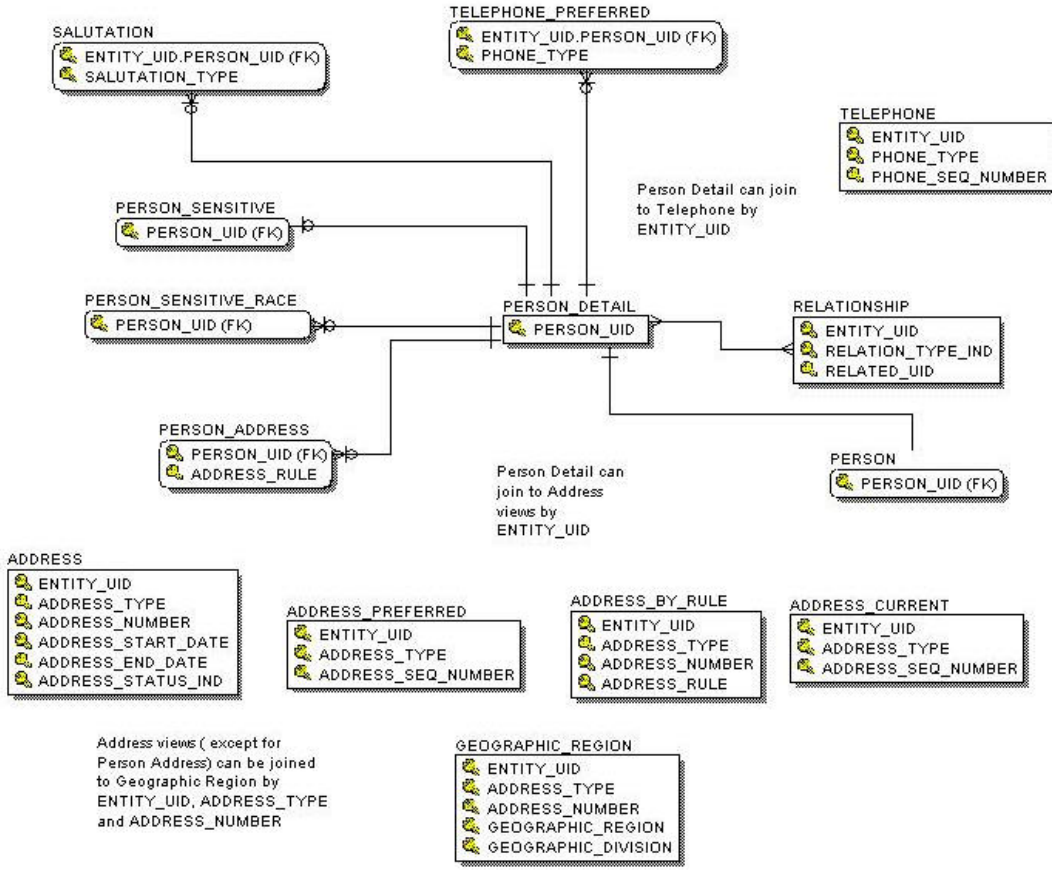
Lesson: De-normalized Database (Continued)

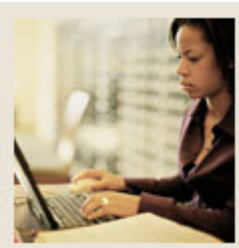
Jump to TOC

Primary and foreign keys

Each Entity Relationship Diagram (ERD), known in the ODS Metadata as a Business Concept Diagram, contains a central or 'driver' reporting view that is the primary focus of each business concept. For each reporting view, only the primary keys are included in the ERD in order to make the diagrams simpler to read. These keys represent the columns that uniquely identify a row or rows in a reporting view. A yellow key symbol indicates a primary key. An *(FK)* beside a column name in the key designates the columns that are common between associated reporting views.

In the example of an Entity Reporting Diagram, can you identify the primary keys? the foreign keys?





Section C: What is the ODS?

Lesson: Interactive Metadata

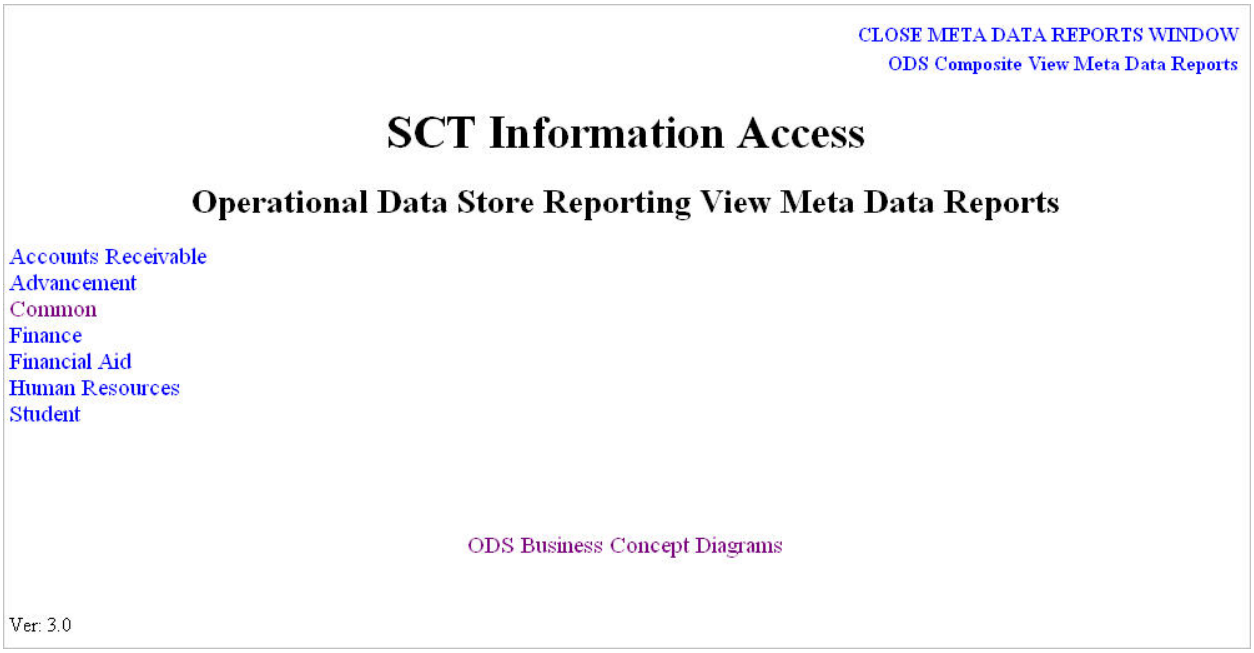
Jump to TOC

Introduction

Metadata is information describing the data in tables. Metadata consists of information such as the source and targets of the data.

Metadata Reports

There are many metadata reports for both common and product-specific data. You can also choose to view the information in an ODS Business Concept Diagram, which graphically shows the relationships of the data within a view.



Section C: What is the ODS?

Lesson: Interactive Metadata (Continued)

Jump to TOC

Metadata report example

RETURN TO ODS META DATA REPORTS LIST

Common Reporting View Meta Data Reports

Target Reports:

Reporting View	Description	Key & Frequency	Recommended Search Columns
ACTIVITY	Contains all of the activity and leadership combinations recorded for the person by the institution, including academic period related activities when the person was a student as well as subsequent activities stored for an alumnus of the institution.	One row per person per activity and leadership role or per activity and academic period.	ENTITY_UID
ADDRESS	Contains all addresses for an entity, person, institution, or organization.	One row per entity per address type per address number per address start date and address end date.	ENTITY_UID ENTITY_UID, ADDRESS_TYPE, ADDRESS_S
ADDRESS_BY_RULE	Contains all addresses for an entity/person, institution, or organization per the display rules.	One address per entity per address type per address	ENTITY_UID ENTITY_UID, ADDRESS_TYPE

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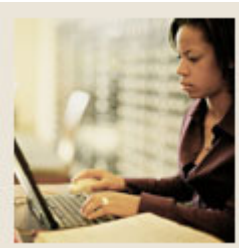


Section C: What is the ODS?

Lesson: Interactive Metadata (Continued)

Jump to TOC

Interactive metadata

By clicking one of the metadata links, the report will run and appear on screen. The example below shows the ADDRESS report. When creating ad hoc reports, you can use the metadata to research the source table name and source column of the data you want to include.

RETURN TO REPORTING VIEW REPORTS LIST
Common Reporting View Reports

SCT Operational Data Store
Reporting View Target: ADDRESS

Description	Contains all addresses for an entity, person, institution, or organization.
Key & Frequency	One row per entity per address type per address number per address start date and address end date.
Recommended Search Columns	ENTITY_UID ENTITY_UID, ADDRESS_TYPE, ADDRESS_START_DATE, ADDRESS_END_DATE, ADDRESS_STATUS_IND

Target Column	Business Definition	Database Data Type	Source Name	Source Column
ADDRESS_END_DATE	Calendar date when this address becomes inactive.	DATE	SPRADDR	SPRADDR_TO_DATE
ADDRESS_NUMBER	Sequence used to identify different addresses within the same address type.	NUMBER	SPRADDR	SPRADDR_SEQNO
ADDRESS_SOURCE	The source or means by which this address detail was received (notified by addressee, room assignment, etc.)	VARCHAR2 (63)	SPRADDR	SPRADDR_ASRC_CODE

Section C: What is the ODS?

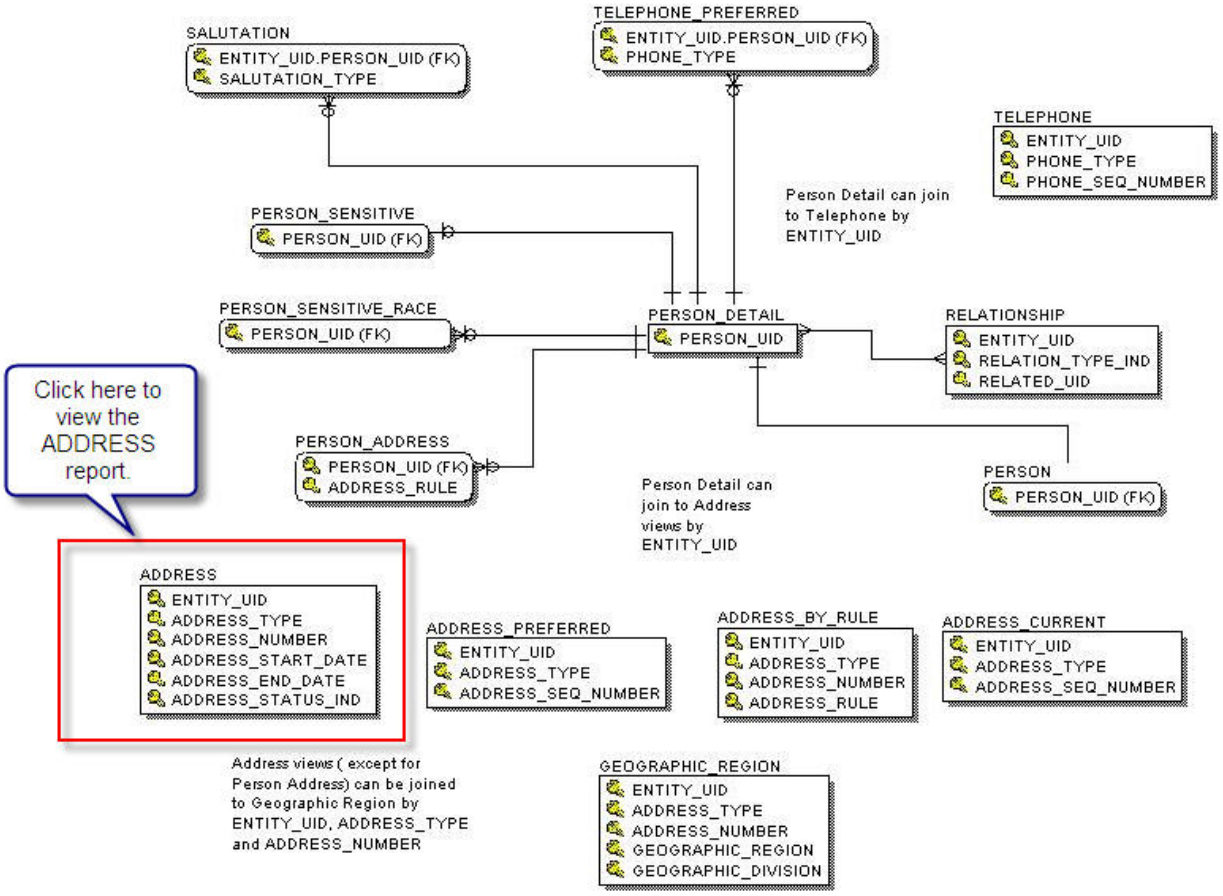
Lesson: Interactive Metadata

Jump to TOC

Business Concept Diagram - example

You can also click on the interactive Business Concept Diagram to find the same information. The Business Concept Diagram gives a broader graphic representation of how the data in the view works together.

Note: See the product-specific ODS Training Workbooks for more information.



Section D: Why use an Operational Data Store

Lesson: Why use an Operational Data Store?

Jump to TOC

Introduction

An ODS can produce standard and custom reports without the typical overhead associated with a transactional system. An ODS system is built specifically to manage the complex queries associated with institutional report generation.

An ODS also provides the ability to select point-in-time, or frozen data. For example, many institutions close the course refund period three weeks from the start of an academic period; you can select specific data as of this date and use the data from this timeframe in your reports. This provides an accurate count of full-time enrollment, or the amount of revenue generated to this point in time.

The performance advantages associated with the ODS are perhaps the greatest benefit not only on the ODS system, but also for the administrative system. An ODS is designed and built specifically for query purposes. This design results in faster query times in addition to increased load balancing on the administrative system.

Most upgrades to the administrative system do not affect the ODS.

If changes are made in Banner that have an effect on the reporting views, the changes will be reviewed to determine if the ODS needs to be updated.

Summary of advantages

In summary, the advantages of an ODS are:

- built to address reporting queries not for efficiency of data capture.
- produce reports without the overhead of a transactional system.
- provide for the freeze of data to accommodate point in time reporting.
- most upgrades to the administrative system do not affect the ODS.

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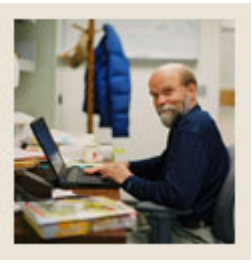


Section E: ODS Administrative User Interface

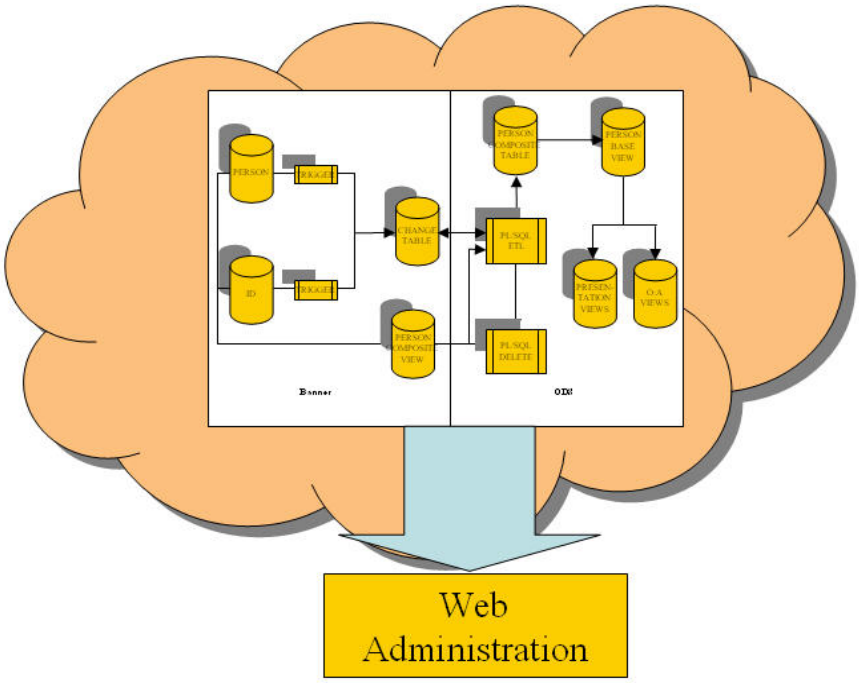
Lesson: ODS Administration

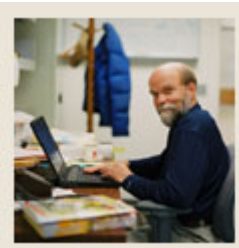
Jump to TOC

Introduction

ODS Administrators can do the following tasks in the Administrative User Interface:

- Preferences and Security
  - Define the appearance of the meta data
  - Create and maintain Users
  - Create and maintain Data Display Rules
  - Create and maintain Security Rules
- Information Access Options
  - Set up Parameters
  - Schedule processes
  - View Control Reports
  - View/Remove Scheduled Processes
  - Freeze Data maintenance
- Information Access Meta Data
  - View the meta data
  - Update/edit/publish the meta data
- Web Tailor Administration





Section E: ODS Administrative User Interface

Lesson: Setting Up User Accounts

Jump to TOC

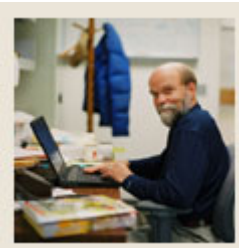
Introduction

You can use the ODS Administrative Interface to set up user accounts.

Procedure

Follow these steps to set up a User Account.

Step	Action
1	Log into ODS Administrative Interface.
2	Click the **Preferences and Security** link.
3	Click the **Set Up Users and PIN** link.
4	Check the **Create** button
5	Fill in the user information.
6	Click the **Save** button.



Section E: ODS Administrative User Interface

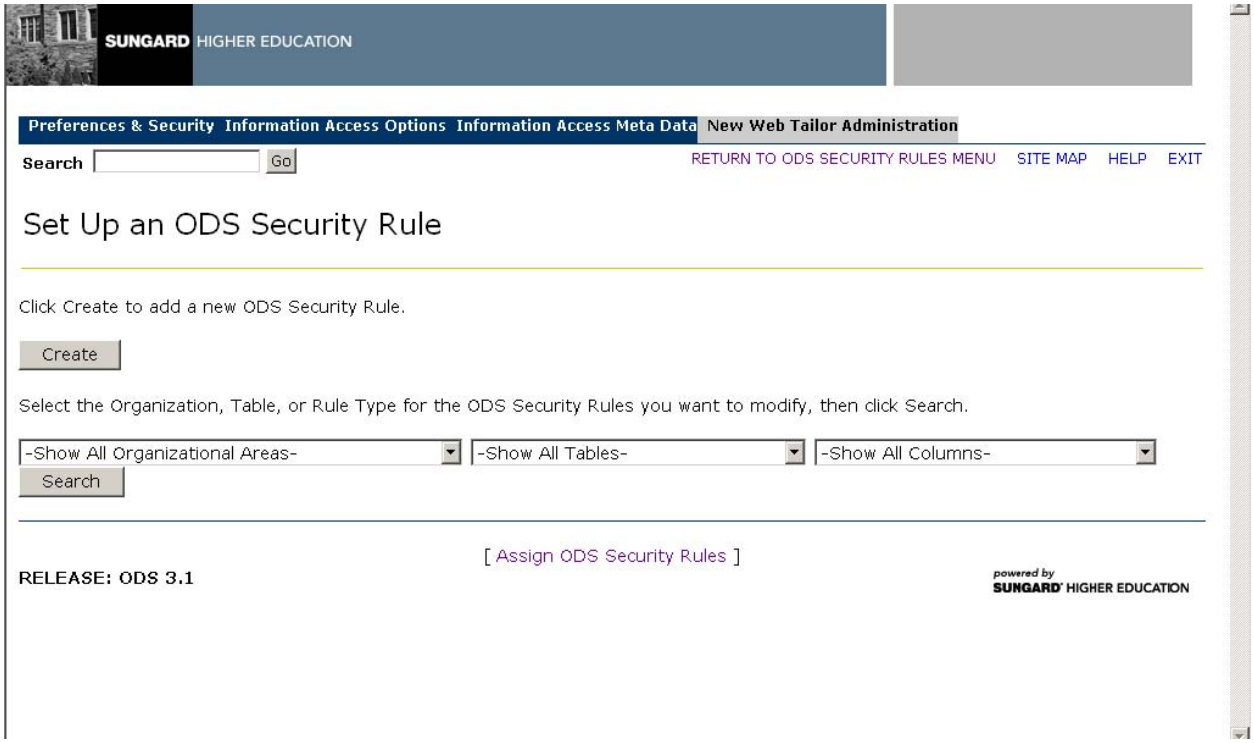
Lesson: Maintaining Fine-Grained Access Rules

Jump to TOC

Introduction

You can create and maintain fine-grained access rules that define values each user can view.

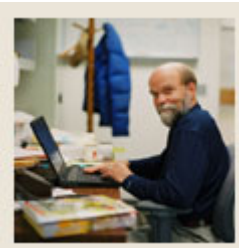
Screen Image



Procedure

Follow these steps to create a security rule.

Step	Action
1	Log into ODS Administrative Interface.
2	Click the **Set Up ODS Security Rules** link.
3	Click the **Set Up an ODS Security Rule** link.
4	Check the **Create** button
5	Fill in the Information
6	Click the **Save** button.



Section E: ODS Administrative User Interface

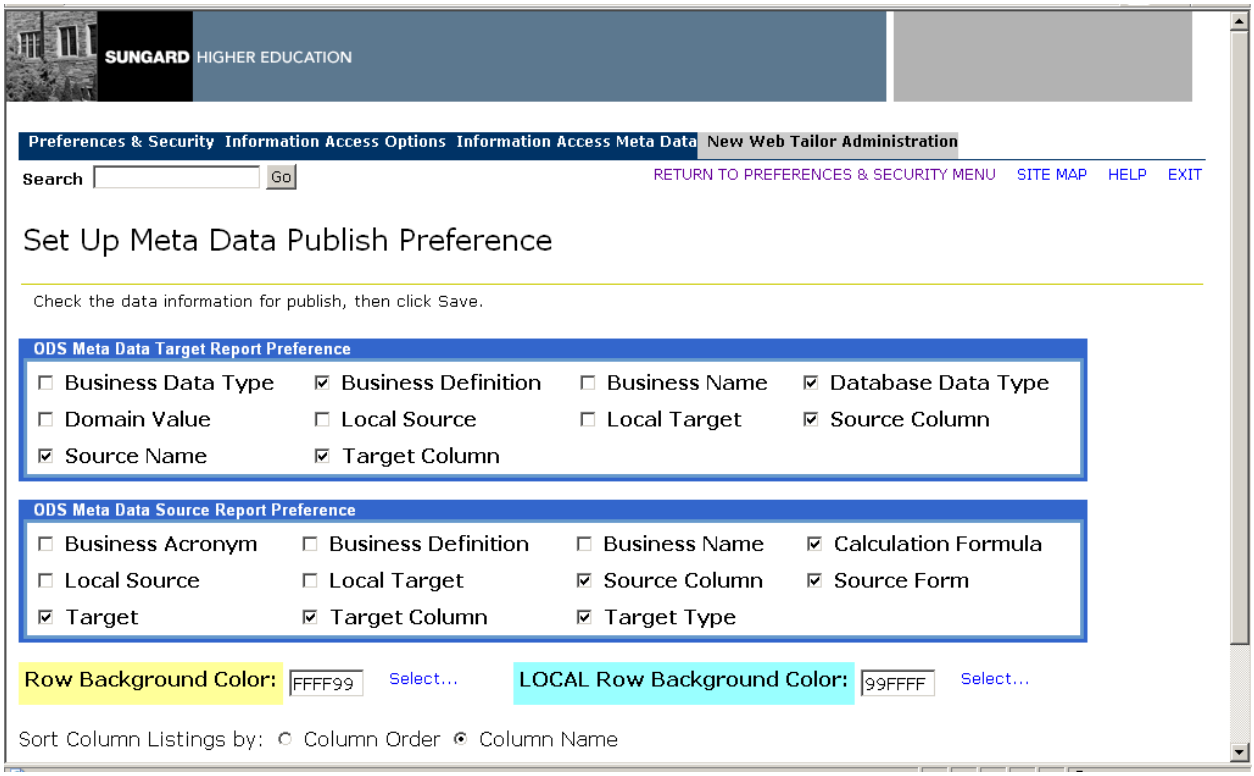
Lesson: Setting Metadata Preferences

Jump to TOC

Introduction

You can set global preferences that define the appearance of metadata.

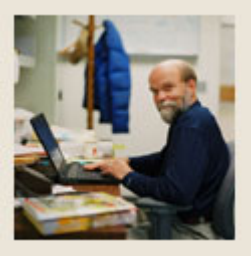
Screen Image



Procedure

Follow these steps to set metadata preferences.

Step	Action
1	Log into ODS Administrative Interface.
2	Click the **Preferences and Security** link.
3	Click the **Institutional Preferences** link.
4	Click the **ODS Publishing Preferences** link
5	Check the data information to publish.
6	Click the **Save** button.



Section E: ODS Administrative User Interface

Lesson: Setting Up Data Display Rules

Jump to TOC

Introduction

Data Display Rules control which data values to retrieve and how to display various types of data. For example – test scores or address types. You should set up Display rules at the "Institution" level. Data display rules are stored in the MGRSDAX table which has predefined delivered values. This matches external (user-defined) codes with internal (SunGard-defined) codes.

Important concepts

- **i)** MGRSDAX in the ODS is copy of the Crosswalk validation table (GTVSDAX) in Banner
- **ii)** MGRSDAX specifies the display rules that define code values loaded into the ODS
  - **(1)** Internal Groups, Internal Codes, and Sequences set by SunGard ie. Address, ADMSADDR, 1
  - **(2)** External Codes set by users ie. PR
- **iii)** MGRSDAX controls hierarchy of data columns in Slotted Tables/Views in the ODS

Note: You need to review all delivered Display Rules and edit them to reflect your institution's specific code values used by your ODS reporting users.

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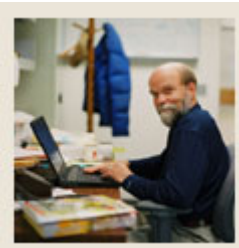


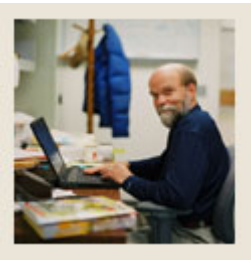
Section E: ODS Administrative User Interface

Lesson: Setting Up Data Display Rules (continued)

Jump to TOC

MGRSDAX fields

Field	Description
Internal Group	High-level group of rows of data (**Internal Code**s) that are categorized together to provide multiple entries for a single concept. The value is pre-determined by SunGard Higher Education; you should not change it.
Internal Code 1	Specific code relationships for source system concepts. This field is used internally within PL/SQL functions and procedures to determine which row(s) to retrieve from the MGRSDAX table. The value is pre-determined by SunGard Higher Education; you should not change it.
External Code	User-specified values that usually come from rules and validation tables for the production version of the product. Unless this field is delivered with the value 'FIELD NOT USED', you should enter the values used by your institution to define a particular code. The values are then translated to the corresponding **Internal Code** for that particular concept for internal processing purposes. Note: You need to change this field so that the internal codes match your institution's code values.
Internal Code Sequence Number	Internal sequence number that provides either a hierarchy or positional identifier: • As a hierarchy identifier, it specifies for PL/SQLfunctions and procedures the order in which to retrieve specific source system data. Each sequence number should be a single numeric value. Start by giving the most important code value a sequence number of *1* and continue by numbering each subsequent value consecutively (such as *2*, *3*, *4*). • As a positional identifier, it is reserved for use with the ODS reporting views where it defines the position within a view where a repeating group should appear. A sequence number is required for hierarchy type concepts.

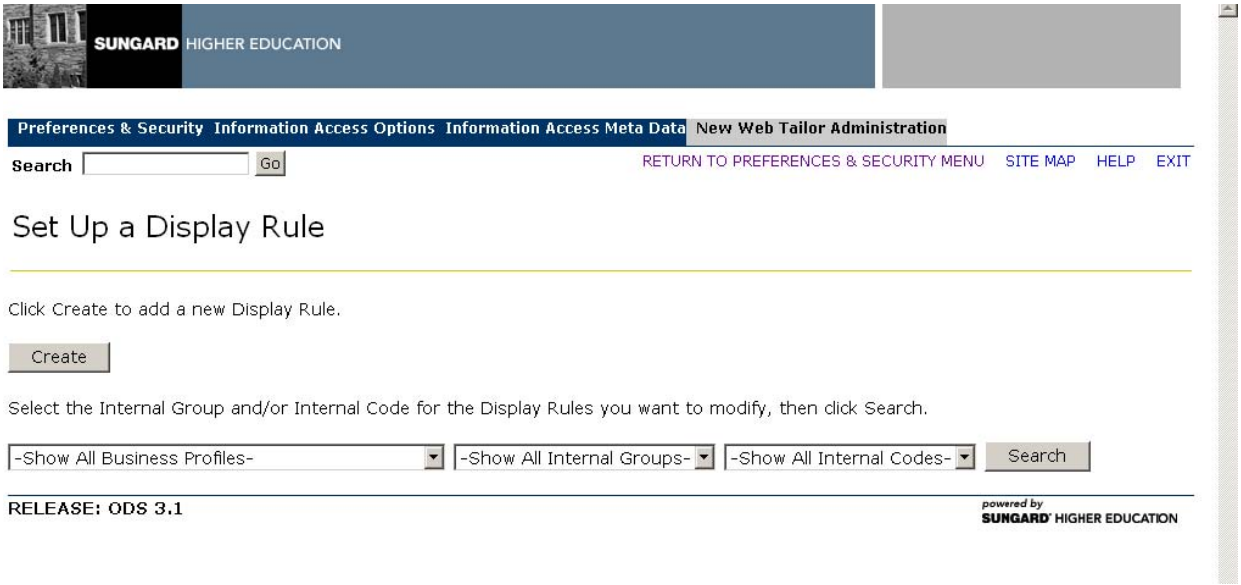


Section E: ODS Administrative User Interface

Lesson: Setting Up Data Display Rules (continued)

Jump to TOC

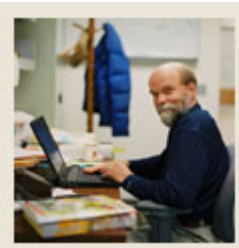
Screen Image



Procedure

Follow these steps to create a display rule.

Step	Action
1	Log into ODS Administrative Interface.
2	Click the **Preferences and Security** link.
3	Click the **Set up Data Display Rules** link.
4	Click the **Create** button
5	Fill in the Information.
6	Click the **Save** button.

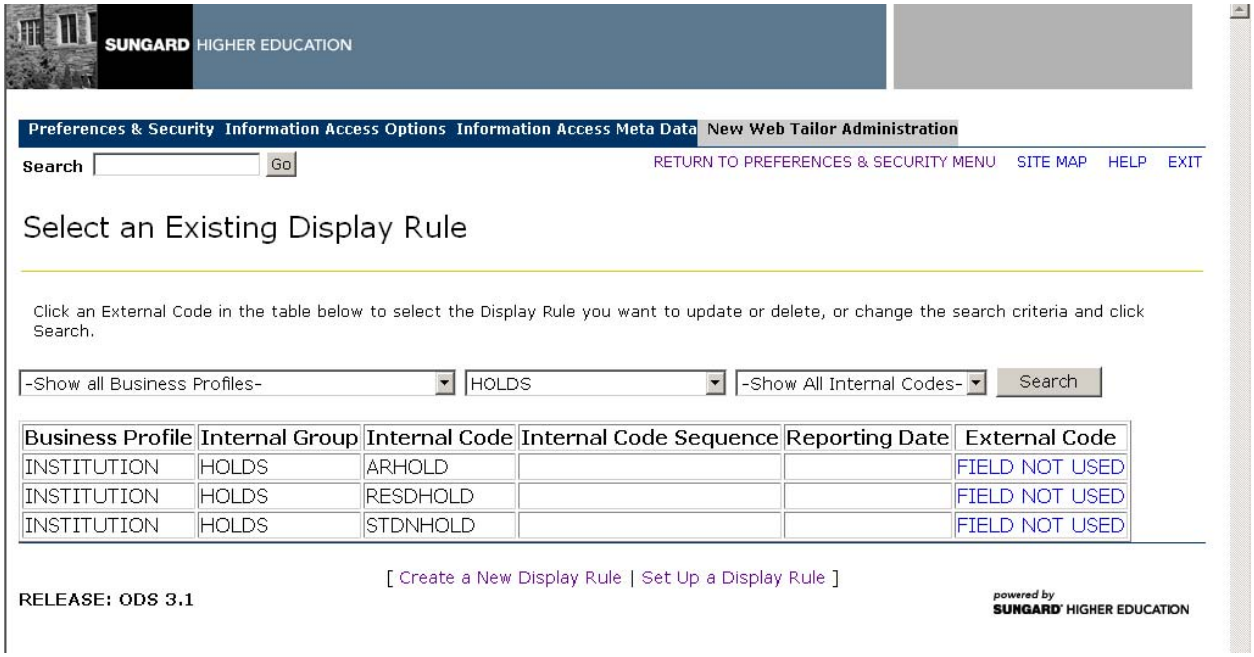


Section E: ODS Administrative User Interface

Lesson: Setting Up Data Display Rules (continued)

Jump to TOC

Screen image



Procedure

Follow these steps to modify a display rule.

Step	Action
1	Log into ODS Administrative Interface.
2	Click the **Preferences and Security** link.
3	Click the **Set Up Data Display Rules** link.
4	Click the **Search** button.
5	Add or update the rule as needed.
6	Click the **Save** button.

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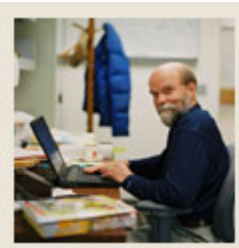


Section E: ODS Administrative User Interface

Lesson: Managing the ETL Process

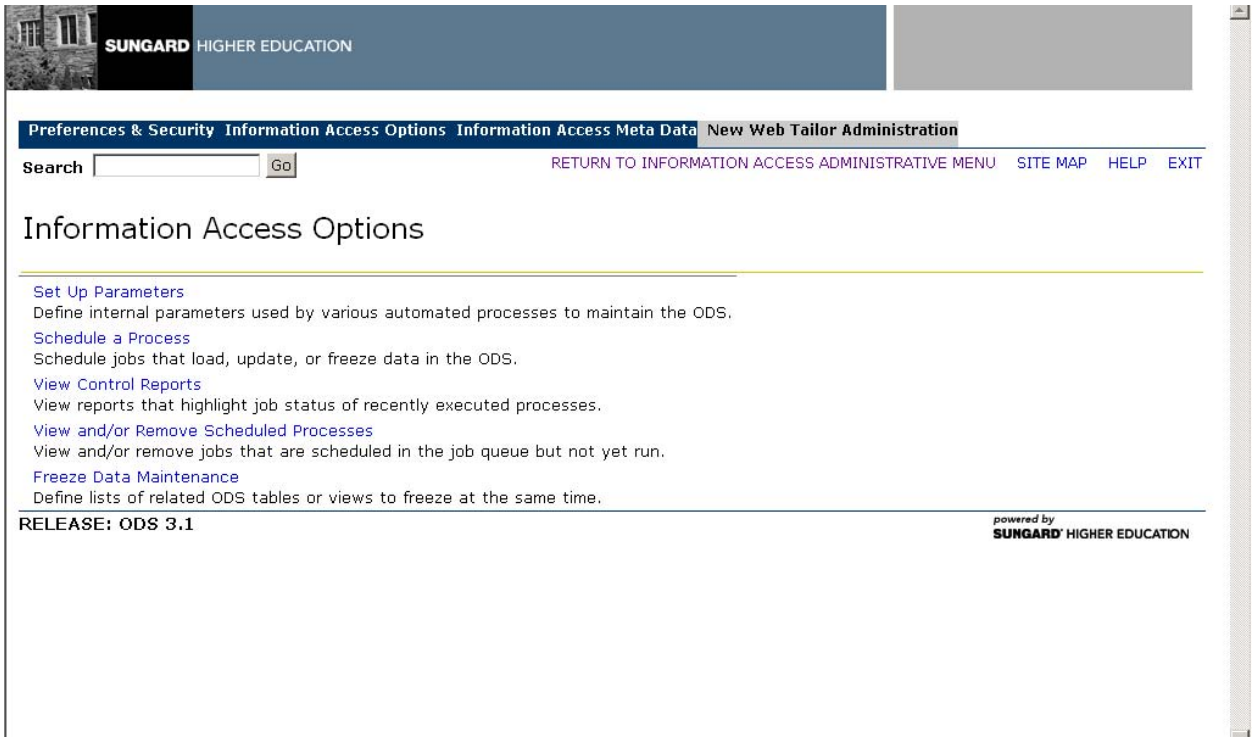
Jump to TOC

Introduction

There are several steps that must be completed to manage the Export, Transform, and Load (ETL) process.

- Set up parameters
- Schedule a process
- View Control Reports
- View/Remove Scheduled Processes
- Freeze Data Maintenance

Screen Image



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Section E: ODS Administrative User Interface

Lesson: Managing the ETL Process (continued)

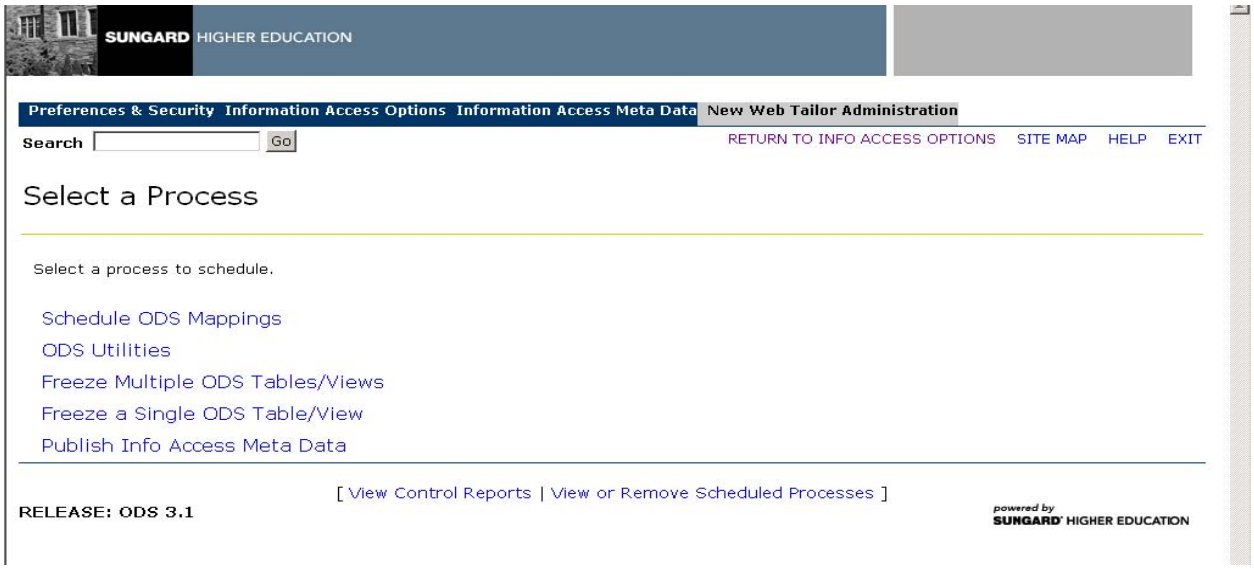
Jump to TOC

Schedule a process

SunGard Higher Education recommends that when the composite tables are updated the related slotted tables are also updated. It is important to keep these synchronized.

Table	Description
Composite	Include the main data that is extracted from the source system and stored in ODS.
Slotted	Store data values for a specific code related to a base table. This optimizes the speed of queries.

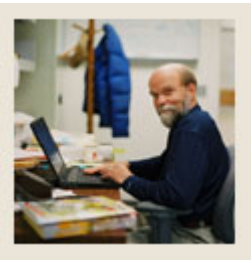
Screen Image



Procedure

Follow these steps to schedule a process.

Step	Action
1	Log into ODS Administrative Interface.
2	Click the **Information Access Options** link.
3	Click the **Schedule a Process** link.
4	Click the **Select a Process** link.
5	Select a process to schedule.



Section E: ODS Administrative User Interface

Lesson: Managing the ETL Process (continued)

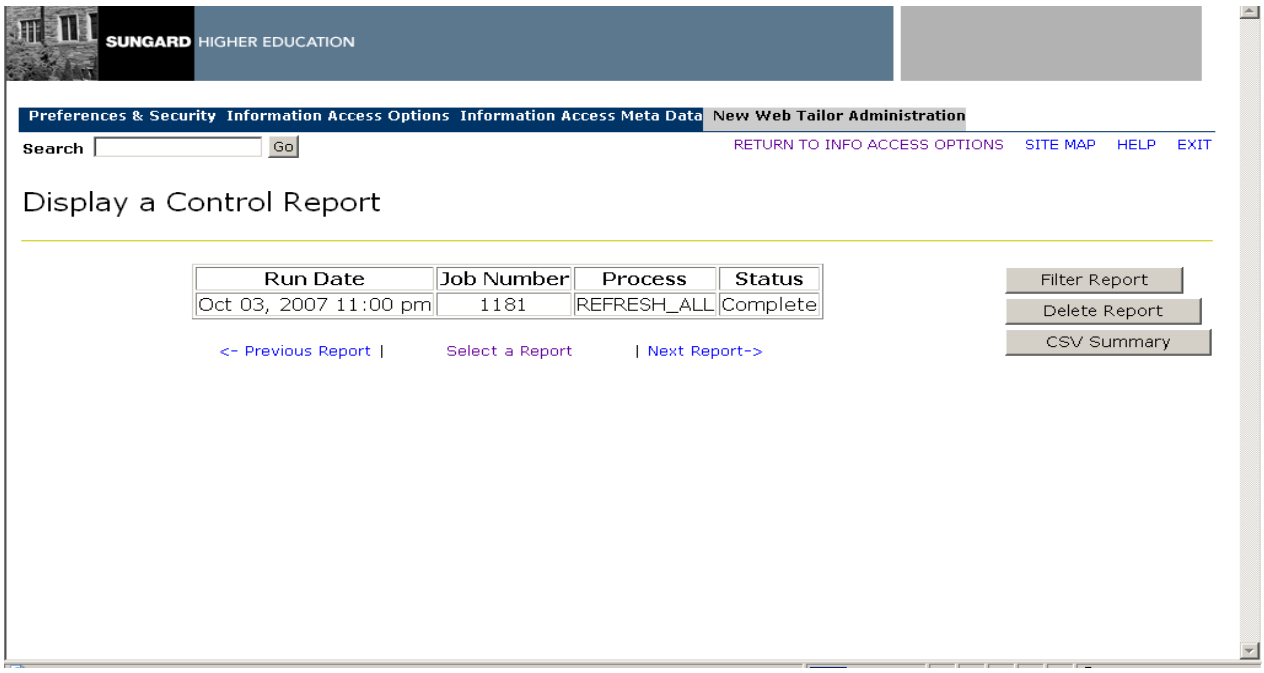
Jump to TOC

View Control Reports

When the process runs, a control report is created to show details of the status of the process. Make sure someone is viewing these immediately each day.

- View Messages
  - View individual error messages
  - Select lines of report using Filter option
  - Save report to a CSV file

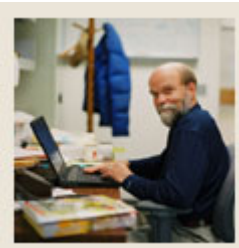
Screen Image



Procedure

Follow these steps to view a control report.

Step	Action
1	Log into ODS Administrative Interface.
2	Click the **Information Access Options** link.
3	Click the **View Control Reports** link.
4	Click on a process from the list..
5	Click on the **CSV** button to extract to Excel.



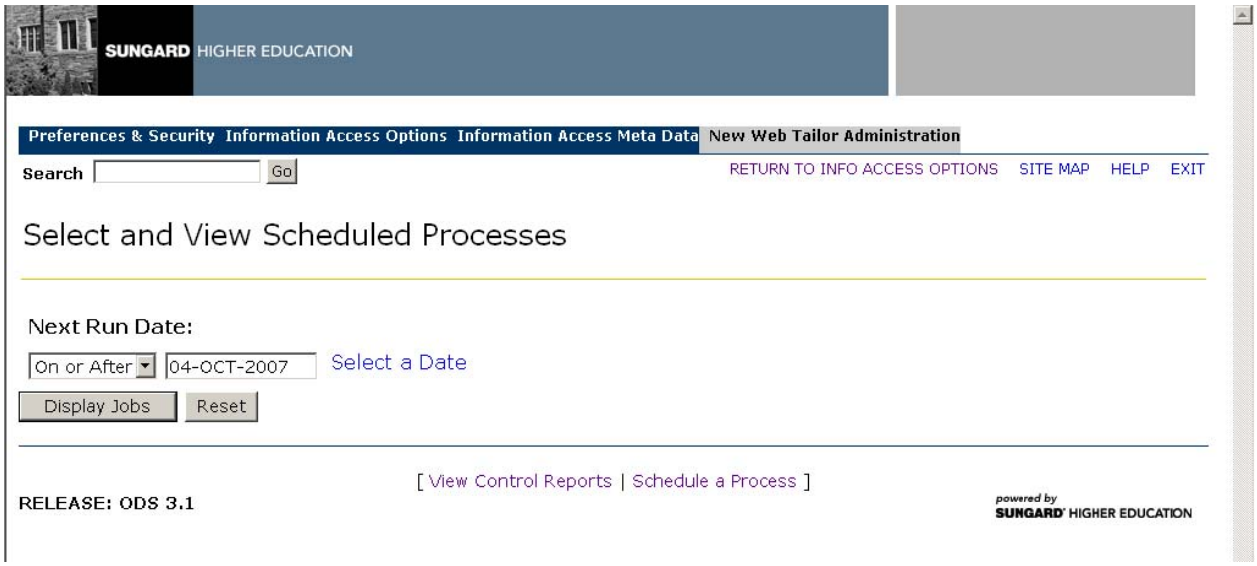
Section E: ODS Administrative User Interface

Lesson: Managing the ETL Process (continued)

Jump to TOC

View/Remove Scheduled Processes

Screen Image



Procedure

Follow these steps to view a scheduled process.

Step	Action
1	Log into ODS Administrative Interface.
2	Click the **Information Access Options** link.
3	Click the **View and/or Remove Scheduled Processes** link.
4	Click the **Display Jobs** link.

Section E: ODS Administrative User Interface

Lesson: Managing the ETL Process (continued)

Jump to TOC

Freeze Data Maintenance

Freezing ODS data allows the saving of snapshots of data tables and/or views at a point-in-time. You can do a comparison report at the same point in time.

Example: Freezing ODS data lets you see how many people registered for a specific class by the first week of September for both this year and last year. In this way you can tell if the final expected registration numbers for a class are way up or way down and can plan for adding/canceling classes as needed.

Considerations

Before you begin to freeze data, you will need to consider the following items:

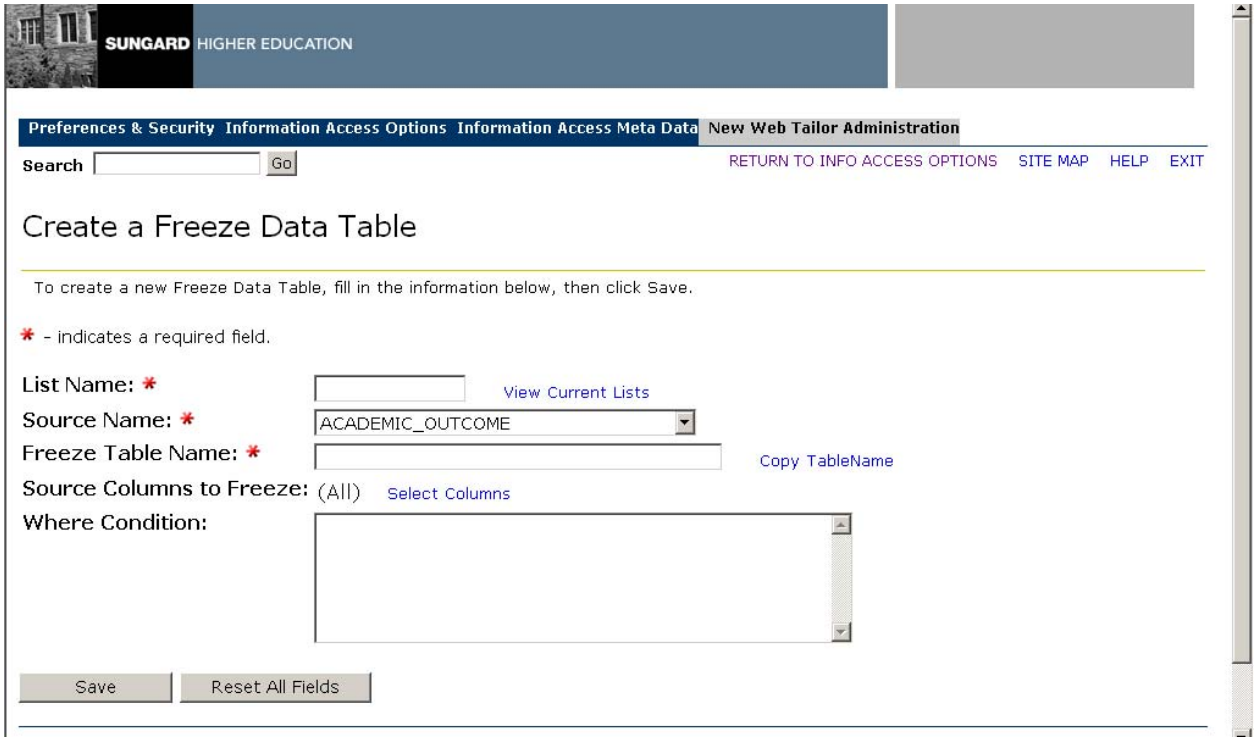
- Naming convention for frozen tables and views?
- Freeze multiple related tables/views at once?
  - Create list of tables/views
  - Schedule a process to freeze them all
- Freeze single table or view?

Section E: ODS Administrative User Interface

Lesson: Managing the ETL Process (continued)

Jump to TOC

Screen Image



Procedure

Follow these steps to create a freeze list.

Step	Action
1	Log into ODS Administrative Interface.
2	Click the **Information Access Options** link.
3	Click the **Freeze Data Maintenance** link.
4	Click the **Create** button**.**
5	Fill in the Information.
6	Click the **Save** button.

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Section E: ODS Administrative User Interface

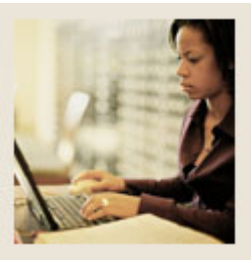
Lesson: Why is my Data out of Sync?

Jump to TOC

Trouble-shooting

The following table will help you trouble-shoot why your data may be out of sync.

CHECK	BECAUSE
Currency of data in the ODS	Currency of data in the ODS is dependent on the timing of a query against the ODS and when the ODS was last refreshed. Changes that occur in the source system after the last refresh of the ODS will not be reflected until the next refresh occurs. This will cause a variance between the two systems until the ODS is refreshed again.
Display Rule Definitions	Display Rules may differ between the two systems. For example, rules defined on the GTVSDAX table in Banner drive the data displayed in the Banner Object:Access views. In the ODS, Display Rules defined on the MGRSDAX table drive the ODS views created to support existing Object:Access functionality. Differences may occur based on which rules are applied to each system.
Security Rule Definitions	Rules may differ between two systems. Security Rules may also cause differences between the two systems. Both Banner and the ODS allow you to set up fine-grained access security at the element level. Rules in both systems are discrete, so there may be differences in the data a user can view based on the security rules defined within each system.



Section F: New in ODS 3.1

Lesson: New List of Values View

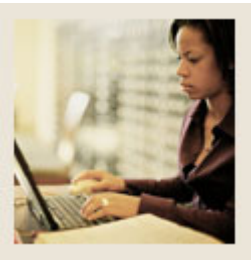
Jump to TOC

Introduction

The ODS has a database schema called ODSLOV that owns the list of value views. Most, but not all, of the views are based on the MGT_VALIDATION composite table. (At least one view is based on an MGRSDAX rule.) MGT_VALIDATION is loaded using Oracle Warehouse Builder (OWB) from validation tables (or in some cases static lists of values) in Banner.

Validation tables loaded into MGT_VALIDATION from Banner have been identified as lists of values that have views assigned to them. (Not all the MGT_VALIDATION validation tables have been created as LOV views.) Each view has the columns TABLE_NAME, VALUE, and VALUE_DESC. TABLE_NAME is the name of the Banner validation table. VALUE and VALUE_DESC are values, or codes, and descriptions for the values. Some of the views also have QUALIFIER, and QUALIFIER_DESC. QUALIFIER is used to group values by a common attribute. For example, it can be Chart of Accounts, Academic Period or a Banner PIDM. QUALIFIER_DESC is a description for the QUALIFIER. Qualifier description is only populated when the qualifier is an Academic Period.

The Cognos ReportNet model and Oracle Discoverer End User Layer have been updated to reference the list of value views for parameters and conditions. Self-Service Reporting also uses the list of value views for search criteria.



Section F: New in ODS 3.1

Lesson: Self-Service Reporting

Jump to TOC

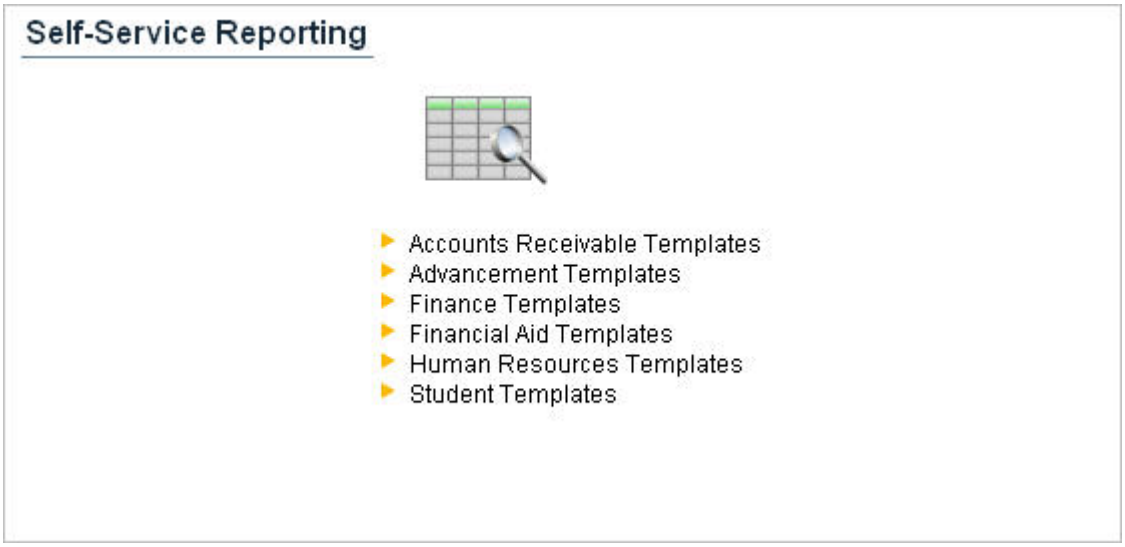
Self Service Reporting

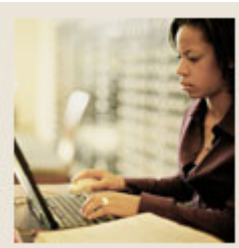
The Self-Service Reporting (SSR) enhancement provides simple, ad hoc access to information within the ODS.

SSR is delivered with report templates that provide examples of various common data retrieval needs across your institution. Each report template is based on the functional data relationships set forth in the Business Concept Diagrams found in the ODS published meta data. The template design for SSR uses a Filter - List – Detail approach. This approach includes a Search Criteria page where you select the various filters to execute a query, a List page that displays the results of that query, and a Detail Reports page where you access additional information specific to any individual result on the List page.

The information on the List and Detail Reports pages can be viewed online or exported to a CSV file (Microsoft Excel format) or XML file for printing or additional manipulation. For some templates, you can also save the unique primary identifier(s) for your List page results to the ODS for use in custom reports developed with your reporting tool. The **Email** icon enables you to send email to everyone on the List page. If you select an individual address from the List page, you can send email to that individual.

Self-Service Reporting menu





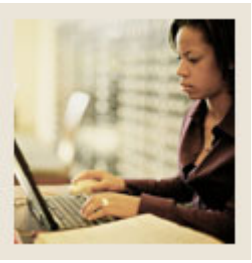
Section F: New in ODS 3.1

Lesson: Changed Data Model ERD

Jump to TOC

Introduction

Data Model (Entity Relationship Diagram - ERD) changes reflect newly identified and new logical relationships between views in the ODS database for ODS Release 3.1. Those changes are reflected in the Cognos Report Studio model and the Oracle Discoverer End User Layer to correctly join new views in the reporting tools and to reflect the new business concepts.



Section F: New in ODS 3.1

Lesson: End User Layer Updates

Jump to TOC

Changed Discoverer EUL and Cognos Report Studio

The Discoverer End User Layer (EUL) for ODS 3.1 was enhanced by adding 51 new functional business areas. The business areas are based upon the Business Concept Diagrams. These now reflect the same relationships as the Cognos Report Studio business views.

The default date hierarchies were removed due to performance issues and replaced with new date hierarchy folders for each different date identified that we want to break down by year, month and day. All underscores from the folder names in the EUL were removed to make them more like business names and to allow for column header wrapping capabilities. However, the underscore was kept in the UID names because UID is an Oracle keyword.

All item names were replaced with the column business names from the meta data repository. This was to make the names more like the English language. Additionally, all true number items were identified as data point numbers and changed to aggregate as sums or averages. This was to ensure that the number items were aggregated the same way assuring you that numbers are accurate by not mixing details with sums. Consequently, all ID fields were redefined as non-data point items to make sure that joins between two folders would work correctly.

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Section G: Related Documentation

Lesson: Related Documentation

Jump to TOC

Related documentation

Documentation	Description
Banner to the Operational Data Store User Guide	A user/reference manual describing the relationship between Banner and the Operational Data Store.
GTVSDAX Handbook	A user/technical/reference manual describing the setup and use of the Concept/Crosswalk Validation Form (GTVSDAX), which is used with the Object:Access views.
Operational Data Store Handbook	A user/technical/reference manual describing the setup and use of the Operational Data Store.
Operational Data Store Installation Guide	A technical guide to the installation of the Operational Data Store.
Operational Data Store Release Guide	A user/technical/reference manual describing the current upgrade/release of the Operational Data Store.
Operational Data Store Upgrade Guide	A user/technical/reference manual describing the steps necessary to upgrade to the current release of the Operational Data Store

Section H: Notes

Lesson: Three Things You Learned Today

Jump to TOC

Write down three things you learned today.

Release Date

Jump to TOC

This workbook was last updated on 10/05/2007.