



**Analyze Direct
Handbook**

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Overview

This document is intended to help you get started using Analyze Direct. Use this guide to help you connect to your data and perform customizations to your account. You will need your specific account URL, username, and password in each case. These are provided to you separately.

Example Parameters:

- URL or Server: abc12345.snowflakecomputing.com
- Username: FirstName_LastName
- Password: user-specified password
- Warehouse: ANALYZE_DIRECT_WAREHOUSE

Ways to Connect

Once your account is provisioned, there are several ways to connect to your data.

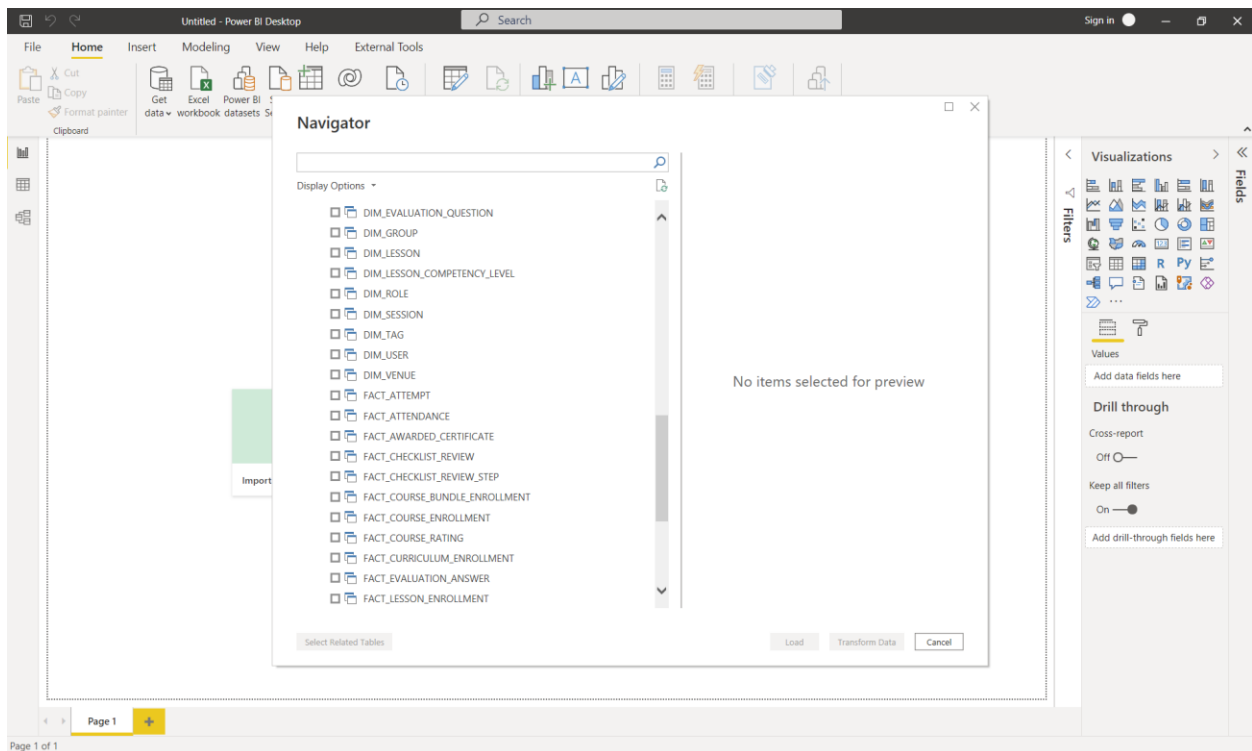
Data Visualization Tools

Connect to your data using many popular data visualization/business intelligence tools. While each tool is unique, most will require you to provide similar parameters.

PowerBI

How to Connect:

1. Launch PowerBI Desktop, click 'Get Data'
2. Search for 'Snowflake' in the certified connectors, click 'Connect'
3. Input your 'server' (Example: abc12345.snowflakecomputing.com)
4. Input your 'warehouse' (Example: ANALYZE_DIRECT_WAREHOUSE), click 'OK'
5. Input your username & password, click 'Connect'
6. Begin selecting tables for your dashboard

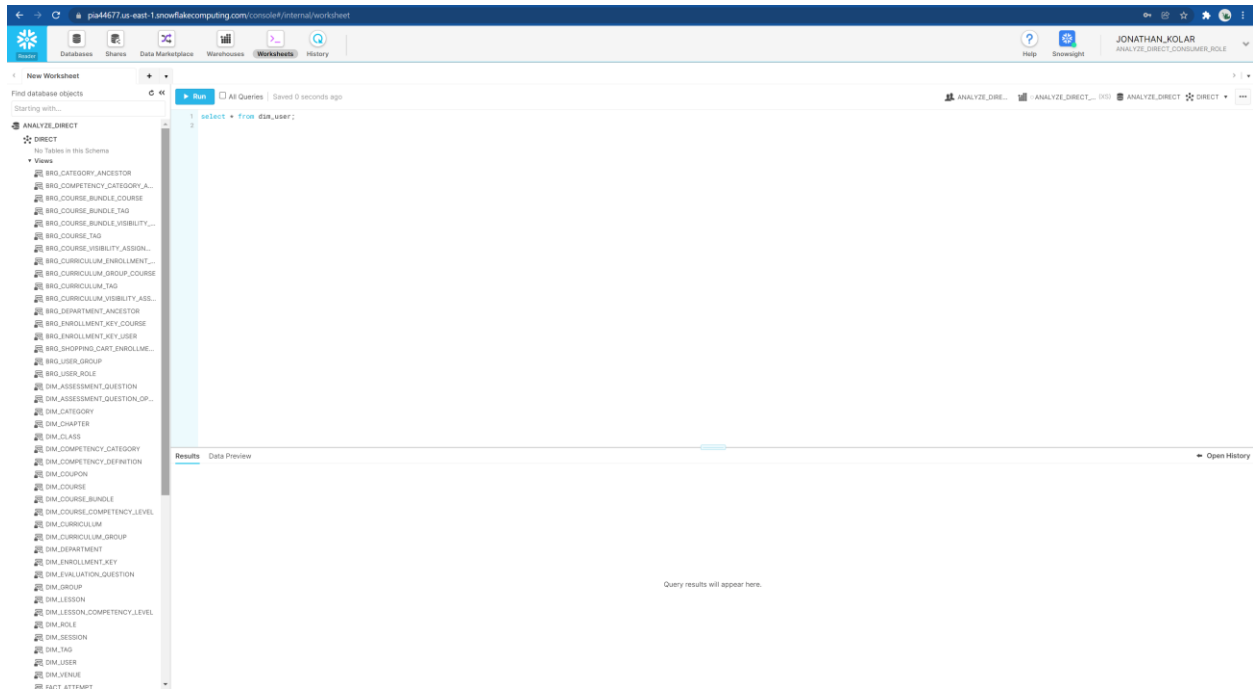


Snowflake Interface

Connect directly to Snowflake using a web browser.

How to Connect:

1. In your web browser, navigate to your URL: EXAMPLE: <https://abc12345.snowflakecomputing.com/>
2. Log in with your username and password.
3. Open a new worksheet and begin creating SQL queries.



Documentation:

<https://docs.snowflake.com/en/user-guide/ui-worksheet.html>

SnowSQL

Connect to your data using command line.

Documentation:

<https://docs.snowflake.com/en/user-guide/snowsql.html>

Data Structure in Analyze Direct

All data of an Analyze Direct client is stored in views in ANALYZE_DIRECT database DIRECT schema. There are 4 types of views: DIM_, FACT_, BRG_ and SEC_. This document refers them as tables for simplicity.

DIM_

Dimension tables contain supplementary data used for categorization, grouping, and filtering. These will always have an incrementally generated surrogate key. They will also have default records for key values of -1 and -2 to represent null and unknown records respectively. -1 surrogate key is populated in fact table for null foreign keys. This ensures that inner join won't exclude fact records which have null foreign keys. -2 surrogate key indicates that the fact record fails to find a surrogate key that should exist in dimension table. **Contact Absorb support if -2 surrogate key is spotted in any fact tables.**

List of DIM_ tables:

- DIM_ASSESSMENT_QUESTION
- DIM_ASSESSMENT_QUESTION_OPTION
- DIM_CATEGORY
- DIM_CHAPTER
- DIM_CLASS
- DIM_COMPETENCY_CATEGORY
- DIM_COMPETENCY_DEFINITION
- DIM_COUPON
- DIM_COURSE
- DIM_COURSE_BUNDLE
- DIM_COURSE_COMPETENCY_LEVEL
- DIM_CURRICULUM
- DIM_CURRICULUM_GROUP
- DIM_DEPARTMENT
- DIM_ENROLLMENT_KEY
- DIM_EVALUATION_QUESTION
- DIM_GROUP
- DIM_LESSON
- DIM_LESSON_COMPETENCY_LEVEL
- DIM_ROLE
- DIM_SESSION
- DIM_TAG
- DIM_USER
- DIM_VENUE

FACT_

Fact tables contain data for aggregation and evaluation. In addition to measurement data, a fact table always contains surrogate key for each of its associated dimensions.

To help the end user count unique records we add a count field (e.g., COURSE_RATING_COUNT) which just contains a constant value of 1 for each record.

List of FACT_ tables:

- FACT_ATTEMPT
- FACT_ATTENDANCE
- FACT_AWARDED_CERTIFICATE
- FACT_CHECKLIST_REVIEW
- FACT_CHECKLIST_REVIEW_STEP
- FACT_COURSE_BUNDLE_ENROLLMENT
- FACT_COURSE_ENROLLMENT
- FACT_COURSE_RATING
- FACT_CURRICULUM_ENROLLMENT
- FACT_EVALUATION_ANSWER
- FACT_LESSON_ENROLLMENT
- FACT_LOGIN
- FACT_QUESTION_ANSWER
- FACT_QUESTION_RESULT
- FACT_SESSION_ENROLLMENT
- FACT_SHOPPING_CART_ITEM
- FACT_SHOPPING_CART_TRANSACTION
- FACT_USER_COMPETENCY

BRG_

Bridge tables are for Many to Many relationships.

List of BRG_ tables:

- BRG_CATEGORY_ANCESTOR
- BRG_COMPETENCY_CATEGORY_ANCESTOR
- BRG_COURSE_BUNDLE_COURSE
- BRG_COURSE_BUNDLE_ENROLLMENT_COURSE_ENROLLMENT
- BRG_COURSE_BUNDLE_TAG
- BRG_COURSE_BUNDLE_VISIBILITY_ASSIGNMENT
- BRG_COURSE_TAG
- BRG_COURSE_VISIBILITY_ASSIGNMENT
- BRG_CURRICULUM_ENROLLMENT_COURSE_ENROLLMENT
- BRG_CURRICULUM_GROUP_COURSE
- BRG_CURRICULUM_TAG
- BRG_CURRICULUM_VISIBILITY_ASSIGNMENT
- BRG_DEPARTMENT_ANCESTOR
- BRG_ENROLLMENT_KEY_COURSE
- BRG_ENROLLMENT_KEY_USER

- BRG_SHOPPING_CART_ENROLLMENT_KEY
- BRG_USER_GROUP
- BRG_USER_ROLE

SEC_

Security tables are for row level access control. For instance, SEC_DEPARTMENT_ADMIN contains admin user IDs and list of department IDs which the admin manages. When applicable, a table can join to a security table and apply a security filter.

List of SEC_ tables:

- SEC_COURSE_BUNDLE_VISIBILITY
- SEC_COURSE_VISIBILITY
- SEC_CURRICULUM_VISIBILITY
- SEC_DEPARTMENT_ADMIN
- SEC_ECOMMERCE_ADMIN
- SEC_GROUP_ADMIN

Common Table Columns and Concepts

- X_COUNT - A constant value of 1 for each fact record.
- ADDED_BY_USER - Full name of the LMS user resolved from the LMS audit data. De-normalized to the record for performance and ease of use.
- EDITED_BY_USER - Full name of the LMS user resolved from the LMS audit data. De-normalized to the record for performance and ease of use.
- IS_DELETED - Usually resolved from IS_DELETED LMS field.

Changes From the LMS Schema

Analyze Direct does not exactly match the LMS terminology and schema.

Course - Curriculum - Course Bundle

In Analyze Direct a "Course" is only an Online Course or Instructor Led course. The course table only contains those types. The same is true for Course Enrollments, Course Categories, and so on. This change was made to simplify the understanding of the relationships between courses and their containers (Curriculum and Course Bundles)

Ancestor Tables (Hierarchies)

Department and category hierarchies are represented in ancestor bridge tables that link back to the department or category. These are useful for filtering to departments and sub-departments matching a given name.

Data Dictionary

The Public KB Article for the Data Dictionary can also be found here: [Data Dictionary](#).

Note: You'll need to register a user account to be able to view the support documents.

Data Model in Analyze Direct

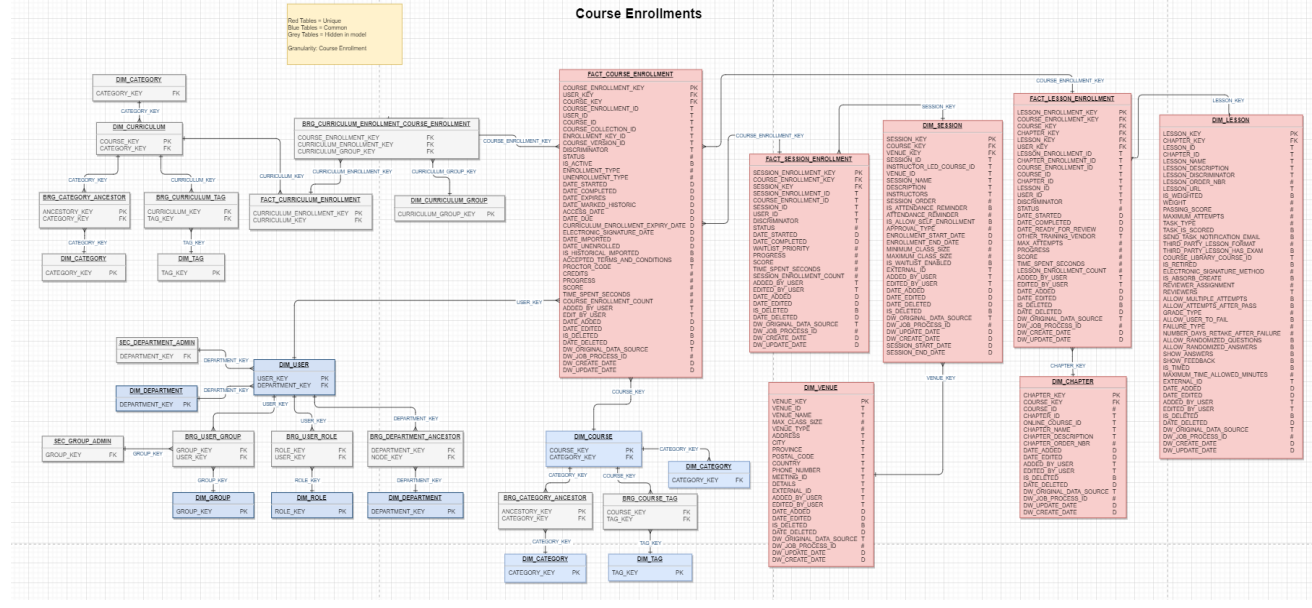
This section details the contents of tables and table relationships in Analyze Direct data models, such as course enrollments, logins, etc.

For full details of the data model diagrams, see this attachment:

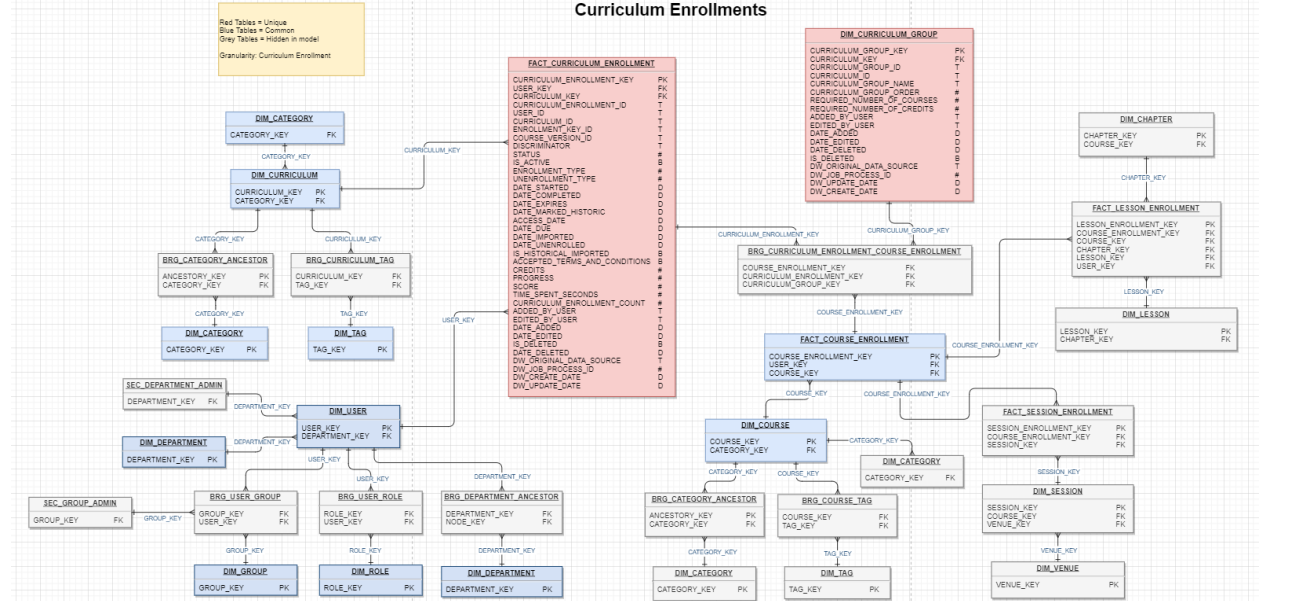


Analyze Direct Data Models.zip

Course Enrolments

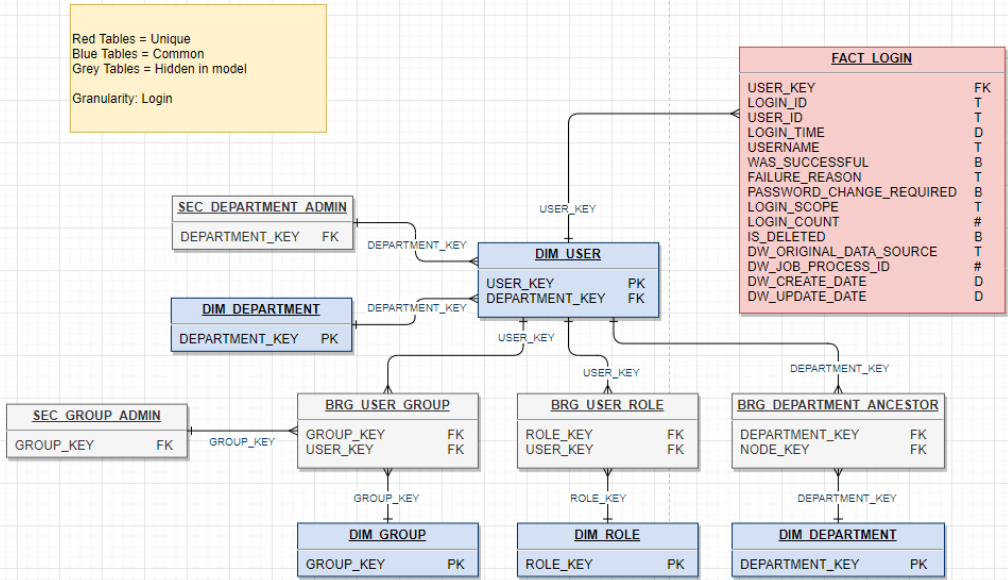


Curriculum Enrolments



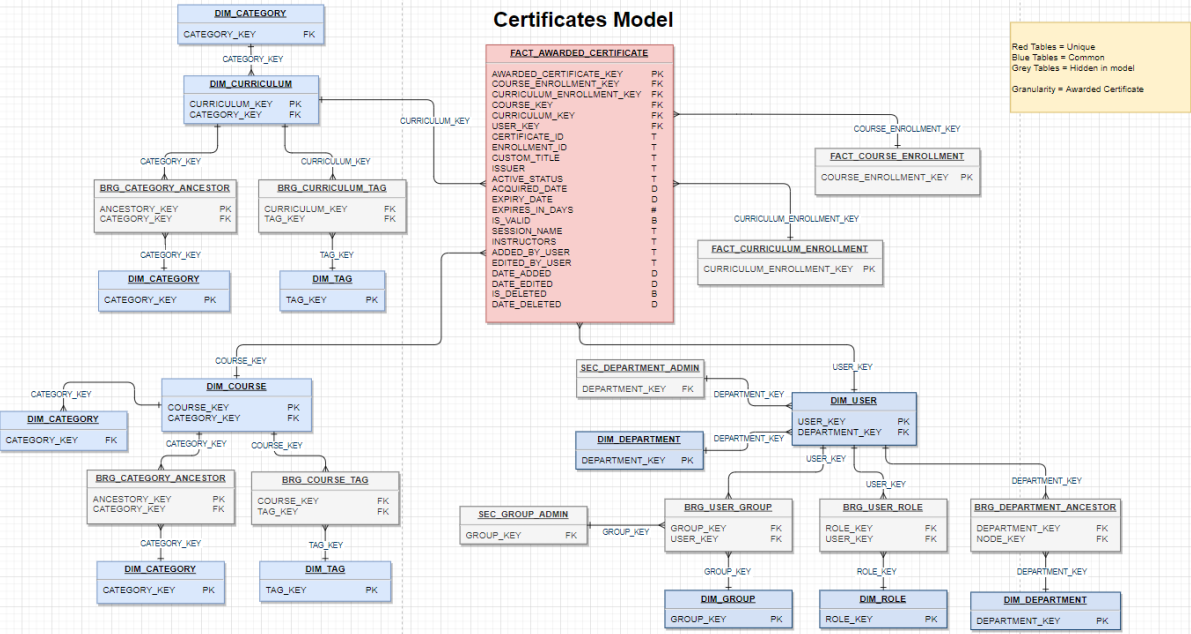
Logins

Logins

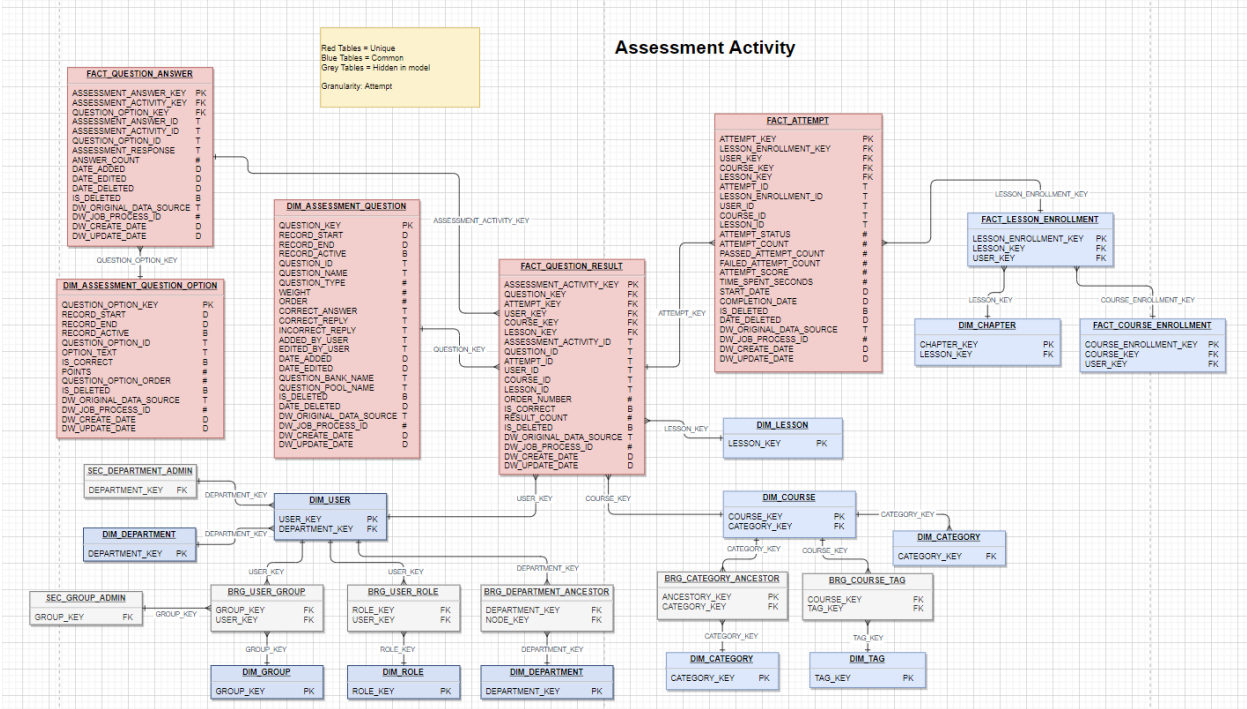


Awarded Certificates

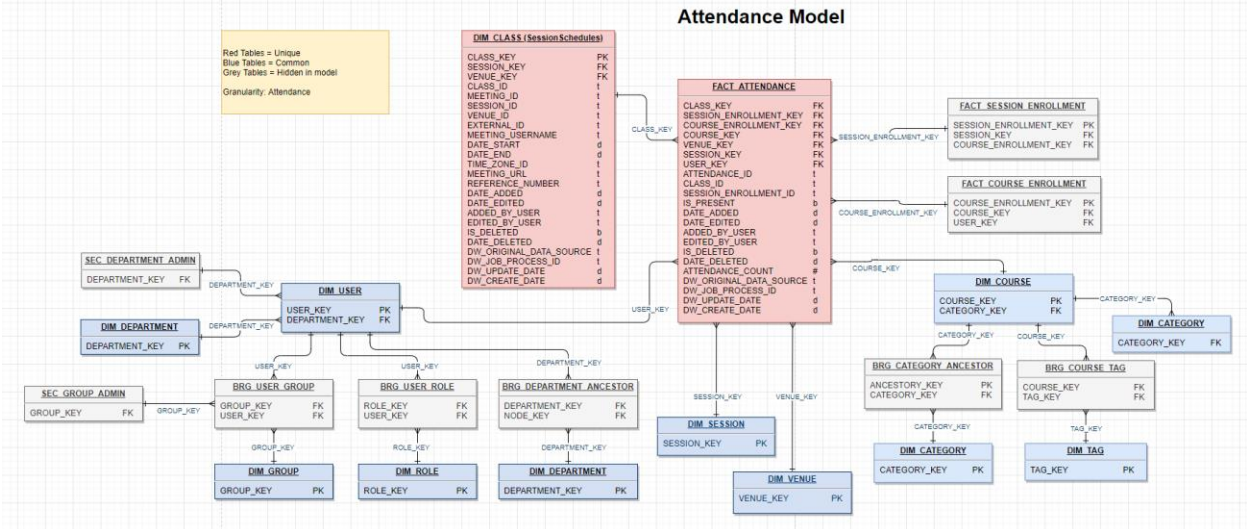
Certificates Model



Assessment Activity



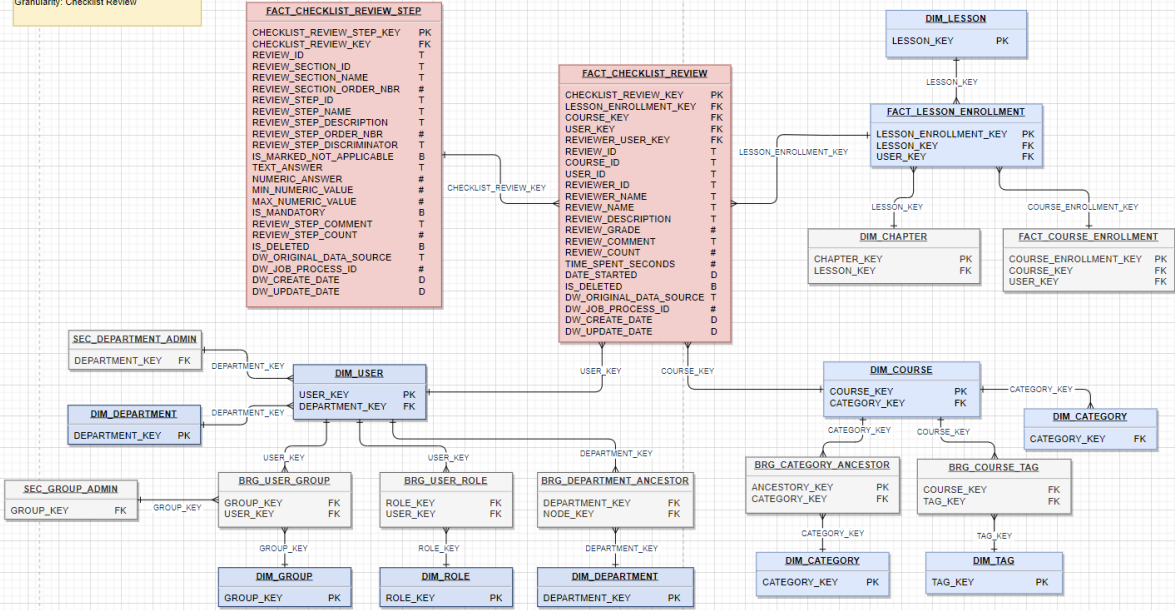
Attendance



Checklist Activity

Red Tables = Unique
 Blue Tables = Common
 Grey Tables = Hidden in model
 Granularity: Checklist Review

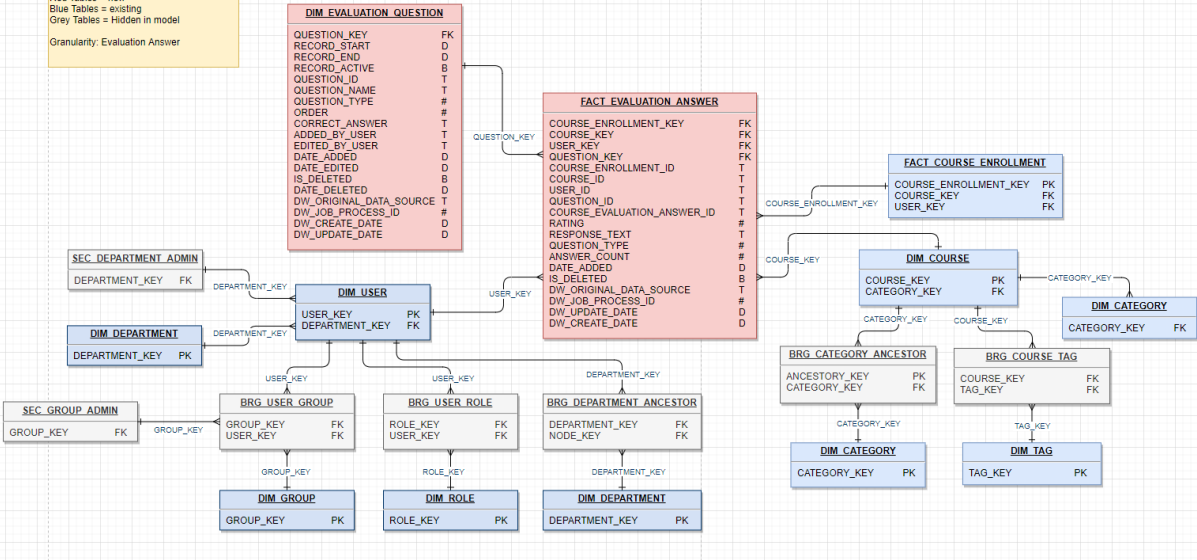
Checklist Activity



Course Evaluations

Red Tables = new
 Blue Tables = existing
 Grey Tables = Hidden in model
 Granularity: Evaluation Answer

Course Evaluations



Helpful Scripts

Create Additional Users

Additional users must be created using SQL in Snowflake. The following script can be modified to create other users for your organization. Use the Snowflake UI in your web browser or SnowSQL to perform this task.

Create New User Script

Reference: <https://docs.snowflake.com/en/sql-reference/sql/create-user.html>

```
USE ROLE ANALYZE_DIRECT_ADMIN_ROLE;
z
-- Create a new user: The following two statements must be run to enable a user
-- to select from the Analyze Direct database.

--1. Create new user
CREATE USER sample_user
  LOGIN_NAME = 'sample.user@example.com'
  FIRST_NAME = 'Sample'
  LAST_NAME = 'User'
  PASSWORD = 'hd2VUjnAnKNaEW08U'      -- Use a secure password
  DEFAULT_ROLE = 'ANALYZE_DIRECT_CONSUMER_ROLE'
  DEFAULT_WAREHOUSE = 'ANALYZE_DIRECT_WAREHOUSE'
  EMAIL = 'sample.user@example.com'
  MUST_CHANGE_PASSWORD = true
  COMMENT = 'Sample user';

--2. Enable user to select from Analyze Direct
GRANT ROLE ANALYZE_DIRECT_CONSUMER_ROLE TO USER sample_user;
```

List Users

Reference: <https://docs.snowflake.com/en/sql-reference/sql/show-grants.html>

```
USE ROLE ANALYZE_DIRECT_ADMIN_ROLE;

-- Retrieve a list of users of consumer role
SHOW GRANTS OF ROLE ANALYZE_DIRECT_CONSUMER_ROLE;
```

Get User Details

Reference: <https://docs.snowflake.com/en/sql-reference/sql/desc-user.html>

```
USE ROLE ANALYZE_DIRECT_ADMIN_ROLE;
```

```
-- Get full details of a users
```

```
DESC USER sample_user;
```

Disable / Enable User

Reference: <https://docs.snowflake.com/en/sql-reference/sql/alter-user.html>

```
USE ROLE ANALYZE_DIRECT_ADMIN_ROLE;
```

```
-- Disable a user
```

```
ALTER USER sample_user SET DISABLED = true;
```

```
-- Enable a user
```

```
ALTER USER sample_user SET DISABLED = false;
```

Delete User

Reference: <https://docs.snowflake.com/en/sql-reference/sql/drop-user.html>

```
USE ROLE ANALYZE_DIRECT_ADMIN_ROLE;
```

```
-- Delete a user permanently
```

```
DROP USER IF EXISTS sample_user;
```

List Resource Monitors

Reference: <https://docs.snowflake.com/en/sql-reference/sql/show-resource-monitors.html>

```
USE ROLE ANALYZE_DIRECT_ADMIN_ROLE;
```

```
-- List resource monitors
```

```
SHOW RESOURCE MONITORS;
```