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# Data Model | Intermediate

**Your Guides:**

Dave Matzdorf and Luis Palacios

# Agenda

- Introductions
- Base Tables
  - Investment Tables
  - Allocations, Actuals, ETCs
  - Cost Plans
  - Risk, Issue, Change Requests
  - Baselines
  - Status Reports
- Modern UX
  - Custom Investments
  - Roadmaps
  - To Do’s
  - Hierarchies
- Data Warehouse (DWH)
- Tips and Tricks
- Admin Activities and System Settings
  - Financial Processing
  - Time Slice Settings
  - Datawarehouse
  - Job Schedules
- Questions

# Introduction

# Introductions

- Take 5 Minutes
- Turn to a Person Near You
- Introduce Yourself
- Business Cards

# Base Tables

# Investment Base Tables

- Investments and Projects:
  - INV_INVESTMENTS
  - PRTASK
  - PRTEAM
  - PRASSIGNMENT
- Timesheets
  - PRTIMESHEET
  - PRTIMEENTRY
- Financials
  - PPA_WIP
  - PPA_WIP_VALUES

# Investment Base Tables

- Exercise: Project Task Assignments Actuals and ETCs By Month – Multi-Dimensional

# Investment Base Tables

```
-- Slice Requests
SELECT *
FROM PRJ_BLB_SLICEREQUESTS SR
ORDER BY SR.ID
```

```
-- Main Slice Table
SELECT *
FROM PRJ_BLB_SLICES
```

```
-- Resource Availability
SELECT SRMR.FULL_NAME
, AV.SLICE_DATE
, AV.SLICE
FROM SRM_RESOURCES SRMR
JOIN PRJ_BLB_SLICEREQUESTS SR ON SR.REQUEST_NAME = 'MONTHLYRESOURCEAVAILCURVE'
JOIN PRJ_BLB_SLICES AV ON SRMR.ID = AV.PRJ_OBJECT_ID AND SR.ID = AV.SLICE_REQUEST_ID
WHERE 1=1
ORDER BY SRMR.FULL_NAME
, AV.SLICE_DATE
```

# Investment Base Tables

```
-- Team Allocation
SELECT TM.PRID TEAM_ID
, INVI.NAME INVESTMENT_NAME
, SRMR.FULL_NAME RESOURCE_NAME
, AL.SLICE_DATE
, AL.SLICE
FROM INV_INVESTMENTS INVI
JOIN PRTEAM TM ON INVI.ID = TM.PRPROJECTID
JOIN SRM_RESOURCES SRMR ON TM.PRRESOURCEID = SRMR.ID
JOIN PRJ_BLB_SLICEREQUESTS SR ON SR.REQUEST_NAME = 'MONTHLYRESOURCEALLOCCURVE'
JOIN PRJ_BLB_SLICES AL ON TM.PRID = AL.PRJ_OBJECT_ID AND SR.ID = AL.SLICE_REQUEST_ID
WHERE 1=1
ORDER BY INVI.NAME
, SRMR.FULL_NAME
, AL.SLICE_DATE
```

# Investment Base Tables

```
-- ETC and Actual Slices
SELECT A.PRID ASSIGNMENT_ID
, INVI.NAME INVESTMENT_NAME
, T.PRNAME TASK_NAME
, SRMR.FULL_NAME RESOURCE_NAME
, S.SLICE_DATE
, SUM(CASE WHEN SR.REQUEST_NAME = 'MONTHLYRESOURCEACTCURVE' THEN S.SLICE ELSE 0 END) ACT
, SUM(CASE WHEN SR.REQUEST_NAME = 'MONTHLYRESOURCEESTCURVE' THEN S.SLICE ELSE 0 END) ETC
FROM INV_INVESTMENTS INVI
JOIN PRTASK T ON INVI.ID = T.PRPROJECTID
JOIN PRASSIGNMENT A ON T.PRID = A.PRTASKID
JOIN SRM_RESOURCES SRMR ON A.PRRESOURCEID = SRMR.ID
JOIN PRJ_BLB_SLICEREQUESTS SR ON SR.REQUEST_NAME IN ('MONTHLYRESOURCEACTCURVE', 'MONTHLYRESOURCEESTCURVE')
JOIN PRJ_BLB_SLICES S ON A.PRID = S.PRJ_OBJECT_ID AND SR.ID = S.SLICE_REQUEST_ID
WHERE 1=1
GROUP BY A.PRID
, INVI.NAME
, T.PRNAME
, SRMR.FULL_NAME
, S.SLICE_DATE
ORDER BY INVI.NAME
```

# Cost Plans

- Cost Plans
  - FIN_PLANS
  - FIN_COST_PLAN_DETAILS
- Cost Plan Details By Period are stored in Timeslices
- Exercise: Forecast and Budget by Project

# Risk, Issue, Change Requests

- Risk Issue Change table
  - RIM_RISK_AND_ISSUES
  - RIM_CHANGE_REQUESTS
- Custom Risk Issue Change tables
  - ODF_CA_RISK
  - ODF_CA_CHANGE
  - ODF_CA_ISSUE

# Baselines

- Project Baselines
  - PRJ_BASELINES
  - ODF_CA_BASELINE
- Baseline Details stored in PRJ_BASELINE_DETAILS for:
  - Project Details
  - Team Details
  - Task Details
  - Assignment Details

# Status Reports

- Status Reports are an add-in object, widely used in Classic UI and MUX
- It is created as a custom object, primary table is: ODF_CA_COP_PRJ_STATUSRPT
- Status Report components include DB functions and views

i.e. Getting the latest status report: cop_prj_statusrpt_latest_v

# Modern UX

# Modern UX and DB Schema Updates

- Modern UX is actively being enhanced with new functionality.
- Releases include new functionality which impacts the DB schema. Some recent enhancements:
  - Checklists
  - To Do's
  - Hierarchies
  - Conversations
  - Agreements
- DWH is also being kept up to date with reporting enhancements and MUX components.
- Best way to remain informed, is by reviewing the release notes and schema documentation:

https://techdocs.broadcom.com/us/en/ca-enterprise-software/business-management/clarity-project-and-portfolio-management-ppm-on-premise/16-0-3/reference/clarity_ppm_advanced_reporting_and_database_schema_index.html

# Custom Investments

- Custom Investments use the Investment meta-object as its base. Sharing key tables like:
  - INV_INVESTMENTS (Identified with ODF_OBJECT_CODE)
  - FIN_FINANCIALS
- Store additional fields by following the custom object convention: ODF_CA_<Object Code>

# Additional Key Tables

- Roadmaps:
  - RDM_ROADMAPS
  - RDM_ROADMAP_ITEMS
- Hierarchies:
  - ODF_HIERARCHIES
- To Do’s:
  - OBA_TODOS

# Admin Tables

- Views and Personalizations:
  - ODF_UI_VIEWS
  - CMN_UI_PERSONALIZATIONS
- Blueprints:
  - ODF_BLUEPRINTS
  - ODF_ABSTRACT_BLUEPRINTS
- Lookups:
  - CMN_LOOKUPS
- Most functionality is stored in the DB like:
  - Business Rules
  - Field Level Security
  - Much more….

# DWH

# DWH

- DWH will change based on the Studio configuration, best way to navigate is understanding the naming convention:

https://techdocs.broadcom.com/us/en/ca-enterprise-software/business-management/clarity-project-and-portfolio-management-ppm-on-premise/15-8/administration/configure-the-data-warehouse-and-advanced-reporting/clarity-ppm-data-warehouse-dwh-conventions.html

- DWH schema can be reviewed by running the Jasper Report: DWH Schema
- DWH operates on a star-based data model composed of:
  - Dimension tables containing custom fields and metadata
  - Fact tables with metrics, organized by periods

# Tips and Tricks

# How To Find Database Objects

- Clarity Studio
  - Portlets
  - Lookups
  - Objects and Attributes
- SQL Trace
- Data Dictionary Tables
  - USER_OBJECTS / SYS.OBJECTS
  - USER_TABLES / INFORMATION_SCHEMA.TABLES
  - USER_TAB_COLUMN / INFORMATION_SCHEMA.COLUMNS
- Jaspersoft reports
- Rego’s Data Dictionary Extractor

# Admin Activities/System Settings

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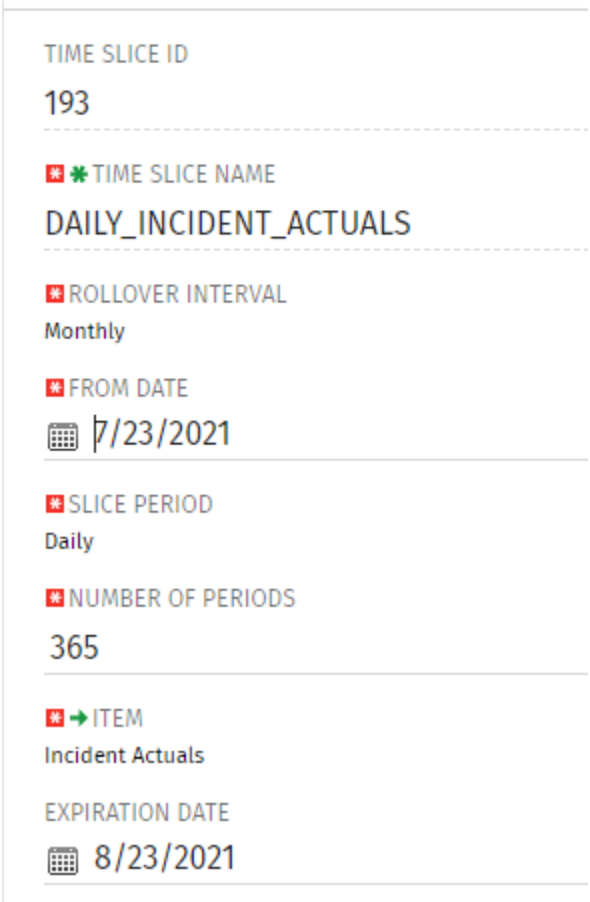
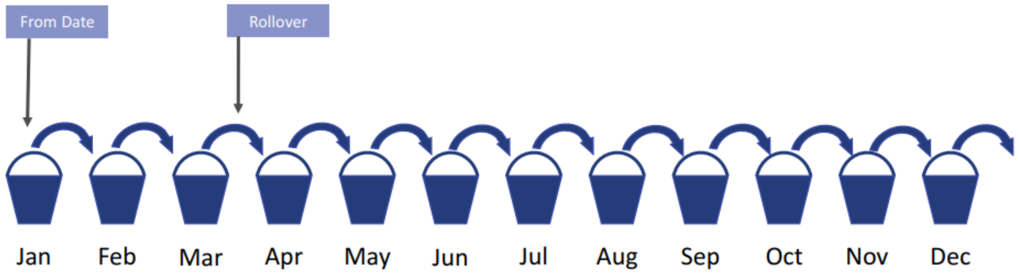
# Administration

- Time Slice Settings:
  - Slice Period
  - From and Number of Periods
  - Rollover Internal and Expiration

# Time Slices and Rollover

- Time slices rollover and only refresh data inside the defined range


TIME SLICE ID
193
TIME SLICE NAME
DAILY_INCIDENT_ACTUALS
ROLLOVER INTERVAL
Monthly
FROM DATE
7/23/2021
SLICE PERIOD
Daily
NUMBER OF PERIODS
365
ITEM
Incident Actuals
EXPIRATION DATE
8/23/2021




**NUMBER OF PERIODS:** number of buckets (12)
**Slice Period:** Monthly

# Administration

- Job Schedules and Important Jobs

| Job | Purpose |
|---|---|
| Time Slicing | This job processes all configured time slices and updates discrete transactional data for the actual task assignment values, Estimate To Complete (ETC) and baselines, time sheet actuals, team and assignment data from a scenario, resource allocations to projects and resource availability. |
| Load Data Warehouse Job | The Load Data Warehouse Job extracts data from the database, transforms the data to a denormalized format, and loads the data into the data warehouse. The frequency of this job determines the freshness of the data. This job populates dimensions, facts, and lookups in the data warehouse for stock objects and attributes and any custom objects and attributes that have been explicitly enabled for inclusion in the Data Warehouse. This job also updates the Advanced Reporting domains, if you have set up Advanced Reporting with Jaspersoft.<br><br>This also works with:<br>Load Data Warehouse Access Rights<br>Create Data Warehouse Trend Job |
| Rate Matrix Extraction Job | This job extracts rate matrix information and refreshes the rate matrix extraction tables. Run this job each time the rate matrix and the financial properties of a project change. The Rate Matrix Extraction job is required before retrieving rates on projects. You can prepare and update the rate matrix data. While the job is running, you can use the rate matrix data. |
| Update Report Tables Job | The Update Report Tables job is required for reports that display any of the following: monthly or weekly calendar periods; FTE amounts; and OBS level or phase grouping options. It is only required for Advanced Reporting reports that display resource skill relationships. The job populates reporting tables based on the parameters that you select when running the job. If these tables are not populated, reports dependent upon them display a 'No Data Found' message. Schedule the job to run nightly to keep the reporting tables up to date. |

# Administration

- Job Schedules and Important Jobs

| Job | Purpose |
|---|---|
| Datamart Extraction Job | This job extracts data from the transaction database tables and stores it in the legacy datamart reporting tables. These tables were the foundation for most stock reports and were used for any legacy custom reports.<br>NBI_R_FACTS<br>NBI_RUN_LOGS<br>NBI_ROLLUP_SQL<br>NBI_RESOURCE_TIME_SUMMARY<br>NBI_RESOURCE_CURRENT_FACTS<br>NBI_PRT_FACTS<br>NBI_PRTF_FM<br>NBI_PROJ_RES_RATES_AND_COSTSCP<br>NBI_PROJECT_FORECAST<br>NBI_PROJECT_CURRENT_FACTS<br>NBI_PM_PROJECT_TIME_SUMMARY<br>NBI_FM_PROJECT_TIME_SUMMARY<br>NBI_EVENTS<br>NBI_DIM_OBS_FLAT<br>NBI_DIM_OBS<br>NBI_DIM_CALENDAR_TIME<br>NBI_DIM_FISCAL_TIME |

# Administration

- Recent Additions/MUX Related Jobs

| Job | Purpose |
|---|---|
| Post Actuals to Investment | Populate time scaled data used in per period metrics, custom investments and hierarchies |
| Time Slicing Sync | Provides time scaled data aggregation to be used in MUX per period metrics and group by functionality |

# Financial Processing

- Timesheets
  - Post Timesheets Job
- Transaction Import (Invalid Transactions)
  - Post Transactions to Financials Job
- Trans Control
  - Post to WIP Job
- WIP

# Questions?

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- Click on **Report PDU's**
- Click on **Course or Training**
- Class Provider = **Rego Consulting**
- Class Name = **regoUniversity**
- Course **Description**
- Date Started = **Today's Date**
- Date Completed = **Today's Date**
- Hours Completed = **1 PDU per hour of class time**
- Training classes = **Technical**
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**Phone**
888.813.0444

**Email**
info@regoconsulting.com

**Website**
www.regouniversity.com