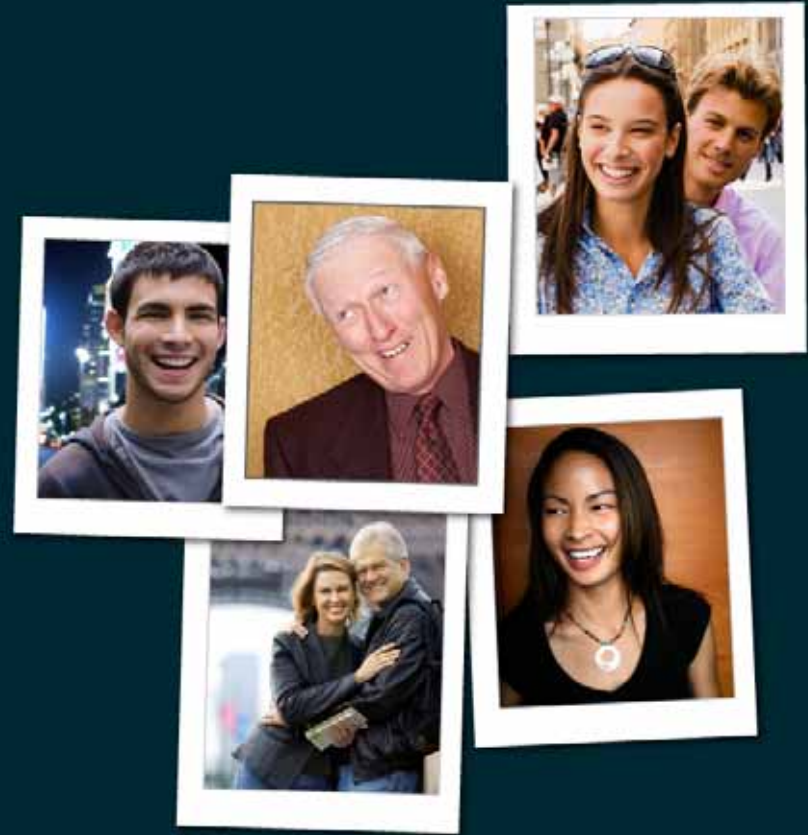




SUMMIT 08



ADVANCED ANALYTICS

Breakout Session

**RIGHT  
NOW.**

- Learn about various “advanced” analytics features.
- Better understand performance implications.
- Use these features in your report writing.

- Reduce the size of the dataset.
  - Report - applied to all levels
  - Level - applied only to the level containing the filter
  - Group - applied to the groups
  - Join - applied to the join

- Inner
- Outer
- Outer -> Inner (implied by filter)
- Outer (with join filter)

- Predefined List - use an existing menu
- User Defined List - define your own menu
- Ad Hoc Value - simple data type values
- Replacement Value - reusable content (not runtime selectable)

- Columns that are in the report, but aren't displayed.
- Allow the data to be sorted or grouped by columns that aren't displayed.

- `date_format()`, `date_group()` and `date_trunc()`
- `if()` - using `&` and `|` to AND and OR conditions together

- Information about your schema
  - Tables
  - Columns
    - Description
    - Suffixes
      - Lables: .id, .name, .desc
      - Currencies: .curr\_id, .rate\_id, .native
    - Menu Items
  - Indexes
  - Joins

- Filters
  - Use indexed columns whenever possible.
  - Do not use expressions on the LHS.
  - Limit use of wildcards.
- Filter Expressions
  - Use AND whenever possible
  - Note that some filters result in multiple filters ORed together.
- Joins - use inner whenever possible, use filters if appropriate
- Sorting - remove unneeded sort columns

- Scripts that execute after the result set has been retrieved.
- Allows further manipulation of the dataset.
- PHP code.
- Examples:
  - Return the most recent thread of an incident
  - Status Changes

- Columns whose value is a function of another column.
- Often alleviate the need to export report to perform additional analysis.
- Examples
  - Comparison
  - Trend
  - Running Totals
  - Moving Averages
  - Percentages of Total

- Objective: Create a report to compare incidents created this week vs. last week.
- Concepts
  - Comparison Columns
    - Use a Comparison Value column to compare data from one time period to another time period
  - Comparison % Columns
    - Use a Comparison % column to show the % change from one period to the next, or vice versa.
  - Layout View Mode
    - Use Layout View mode to quickly customize the display options of your report.
  - Rollups
    - Use Rollups to group data into an easily manageable display.
  - Rollup Calculations
    - Use Rollup Calculations to add calculations that apply to each rollup section.
  - Report Calculations
    - Use Report Calculations to add calculations that apply to entire report.

- Objective: Create a report to display incident creation trends over time.
- Concepts
  - Trend Columns
    - Add a Trend Value column to add a linear trend to your data set.
  - Forecast
    - Add a forecast to your trend column to forecast the trend into the future.
  - Charts
    - Add a chart to display your data in an easily consumable format.

- Data Exceptions
  - Flag rows/cells that meet certain criteria
  - Applications
    - Report Formatting.
      - Use data exceptions when you need to highlight an entire row.
      - Use data exceptions when the exception criteria do not correspond directly to a column.
      - Use data exceptions when you need to display exceptions in charts.
    - Alerts for scheduled reports.
      - Use data exceptions for alerts when you want to send scheduled reports only after certain criteria have been met.
- Conditional Formatting
  - Available 8.2+
  - Similar to Data Exceptions, but easier to use
  - Use conditional formatting when the conditional expression matches the column expression.

- Objective: Create a report to manage tasks.
- Concepts
  - Conditional Formatting
    - Use conditional formatting to change the visual display of certain data items.
  - Data Exceptions
    - Use data exceptions to create alerts for scheduled reports.
  - Inline Gauges
    - Use inline progress bars to increase the readability of reports that contain % columns.
  - Slice
    - Use slicing to quickly bucketize/filter data.
  - Inline Editing
    - Use inline editing to increase productivity.