

# All About Dates

Cindy Spohn | AZBOCUG | August 16, 2017



- We keep the brands you love running!

## Advanced management solutions

### Asset Management & Analytics

Data-driven predictive and preventative management solutions to keep critical equipment running efficiently.

### Business Analytics & Strategy

Strategic consulting to identify opportunities for cost savings using data intelligence.

### Integrated Facilities Management

Full-service facilities management delivered through regional service centers and our High Performance Service Provider network.

### Project & Trade Services

End-to-end support for site remodels, company re-brands, equipment changeovers and project-based initiatives.

### Energy & Sustainability

Corporate sustainability programs, LED lighting solutions and an in-depth knowledge of energy requirements.

### Total Lifecycle Management

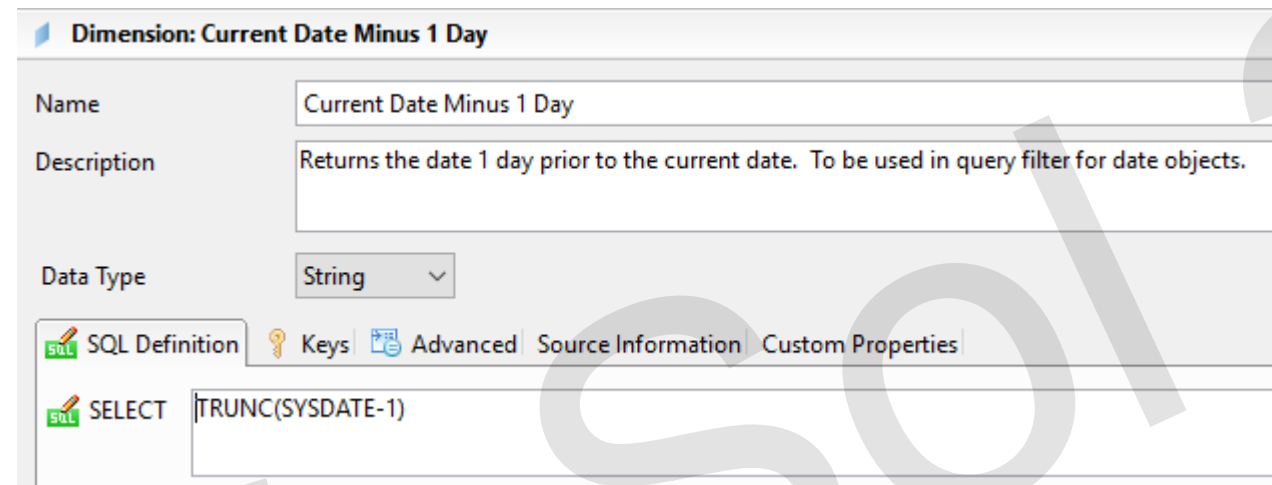
Managing the full progression of each service request: from intake and contractor management to audits and controls.

# ALL ABOUT DATES

- Universe Filtering Methods
  - Date Filter Objects
  - Predefined Query Filter
  - Build Prompt into a Date Dimension
  - Dates vs Details
- Report Filtering Methods
  - Hard Code
  - Prompts
- Dates – Miscellaneous Thoughts
- Dimension vs. Detail
- Date/Time vs. Date
- Date Formatting in Universe
- List of Values

# UNIVERSE FILTERING - DATE FILTER OBJECTS

- Can be used to show data for any dates



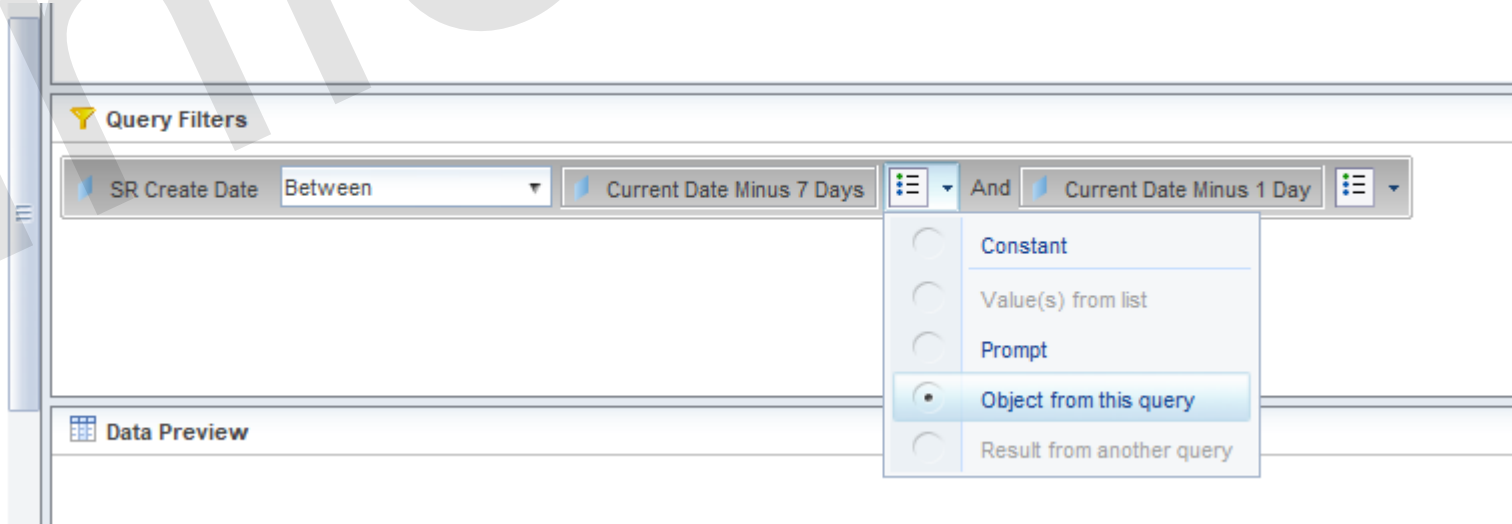
The screenshot shows a configuration window titled "Dimension: Current Date Minus 1 Day". It contains the following fields and tabs:

- Name:** Current Date Minus 1 Day
- Description:** Returns the date 1 day prior to the current date. To be used in query filter for date objects.
- Data Type:** String (dropdown menu)
- Tabs:** SQL Definition (active), Keys, Advanced, Source Information, Custom Properties
- SQL Definition:** SELECT TRUNC(SYSDATE-1)

- Use code based on your database
  - Oracle – TRUNC(SYSDATE-1)
  - SQL – CAST(GETDATE() -1)
- BENEFITS
  - Can be used on any date in your universe
  - Not specific to any one date
  - Easy for users

# UNIVERSE FILTERING - DATE FILTER OBJECTS – CONT'D

- Utilize this technique to define other dates such as
  - First and Last Day of the Month
    - First - TRUNC(SYSDATE, 'MM')
    - Last - TRUNC(LAST\_DAY(SYSDATE))
  - First Day of the Quarter
    - TRUNC(SYSDATE, 'Q')
  - First Day of the Year
    - TRUNC(SYSDATE, 'Y')
- Report Usage



## UNIVERSE FILTERING - DATE FILTER OBJECTS – CONT'D

- Utilize this technique to define other formats
  - Some databases and/or data warehouses store dates as numbers or a character string in a YYYYMMDD format
  - Convert a date to either a character or a number
    - `TO_CHAR(DATE,'YYYYMMDD')`
    - `TO_NUMBER(TO_CHAR(DATE,'YYYYMMDD'))`

# UNIVERSE FILTERING - PREDEFINED QUERY FILTER

- Specific to one date

The screenshot shows a configuration window for a filter titled "Filter: Service Request Dates in the Last 7 Days". It includes fields for Name and Description, radio buttons for Filter Type (Native selected, Business unselected), and tabs for SQL Definition, Properties, and Custom Properties. The SQL Definition tab is active, showing a WHERE clause with a complex date-based query.

**Filter: Service Request Dates in the Last 7 Days**

Name: Service Request Dates in the Last 7 Days

Description: Will pull all Service Requests where the create date is in the last 7 days

Filter Type: ☒ Native ☐ Business

SQL Definition | Properties | Custom Properties

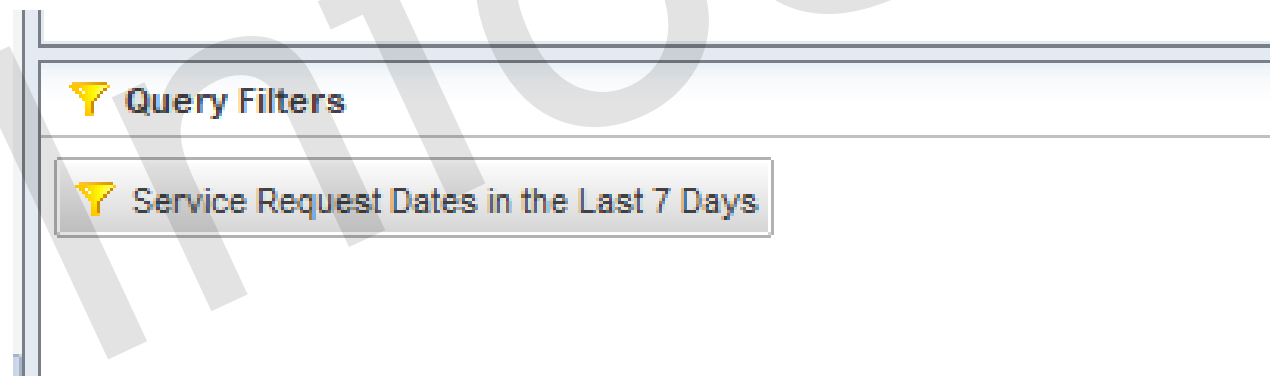
WHERE: @Select(Service Request\Service Request Dates\SR Create Date\SR Create Date) between @Select(IT Only\Cindy - AZBOCUG\Current Date Minus 7 Days) and @Select(IT Only\Cindy - AZBOCUG\Current Date Minus 1 Day)

- BENEFITS
  - Make the specific filters you use the most permanently available
  - You don't need to create the same filters all the time
  - Can be complex or as simple as the one I have created above
  - Users cannot view or edit predefined filters
  - Easy for users



# UNIVERSE FILTERING - PREDEFINED QUERY FILTER

- Benefits Continued
  - Creative use
    - Use a case statement
    - Case when @Prompt('Please enter Service Request Date','D',,Mono,) is null then TRUNC(SYSDATE-1) else @Prompt('Please enter Service Request Date','D',,Mono,) end
- Report Usage





# UNIVERSE FILTERING - PROMPTED DATE BUILT INTO DATE OBJECT

- Specific to one object

**Dimension: SR Create Date**

Name: Service Request Create Date

Description: This is the Date at the site when the Service Request was created. This object will prompt the user to select a date

Data Type: Date

SQL Definition

SELECT TRUNC(SERVICE\_REQUEST.SERVICE\_REQUEST\_OPENED\_DATE)

WHERE TRUNC(SERVICE\_REQUEST.SERVICE\_REQUEST\_OPENED\_DATE) = @Prompt('Please enter Service Request Date', 'D', 'Mono,')

Tables: SERVICE\_REQUEST

- BENEFITS

- Forces the user to enter a date or date range depending on how the object is built even if the user forgets to add a query filter
- Easy for users

# UNIVERSE FILTERING - PROMPTED DATE BUILT INTO DATE OBJECT

- Report Usage
  - Even without query filter will prompt the user to enter a date

The screenshot displays a software interface with two main panels: 'Result Objects' and 'Query Filters'. The 'Result Objects' panel contains a single object named 'Service Request Create Date'. The 'Query Filters' panel includes a descriptive text and a 'Prompts' dialog box. The 'Prompts' dialog box has a 'Prompts Summary' table with one entry: '\* Please enter Service Request Date'. To the right of the table is a section titled 'Please enter Service Request Date' which contains a 'Selected Value(s)' label, an empty text input field, and a date picker icon.

Prompts Summary	
* Please enter Service Request Date	

Please enter Service Request Date

Selected Value(s)

# REPORT FILTERING – HARD CODED DATES

- I never recommend hard coding dates, but it can be helpful while developing
- Use calendar or just use keyboard

The screenshot shows a software interface with two main sections: "Result Objects" and "Query Filters".

**Result Objects:** Contains a single filter labeled "Service Request Create Date".

**Query Filters:** Contains a filter for "Service Request Create Date" with a "Between" operator. The date range is set to "8/1/2018" and "8/7/2018".

A calendar pop-up is displayed, showing the month of August 2018. The date "7" is highlighted with a red box, indicating the end date of the filter range.

	Sun	Mon	Tue	Wed	Thu	Fri	Sat
31	29	30	31	1	2	3	4
32	5	6	7	8	9	10	11
33	12	13	14	15	16	17	18
34	19	20	21	22	23	24	25
35	26	27	28	29	30	31	1
36	2	3	4	5	6	7	8

Buttons at the bottom of the calendar: "Today" and "OK".

# REPORT FILTERING – PROMPTS

- Most flexible (in the world according to Cindy 😊)
- InfoBurst
  - Create macros for scheduling but have the ability to run for any period

The screenshot displays a software interface for report filtering. At the top, there is a tab labeled 'Service Request Create Date'. Below this, a section titled 'Query Filters' contains a filter configuration for 'Service Request Create Date'. The filter is set to 'Between' with a dropdown menu open, showing options: 'Constant', 'Value(s) from list', 'Prompt' (which is selected), 'Object from this query', and 'Result from another query'. The date '8/7/2018' is entered in the adjacent field. The interface includes standard UI elements like icons for help and search.

# DATE – MISCELLANEOUS ITEMS

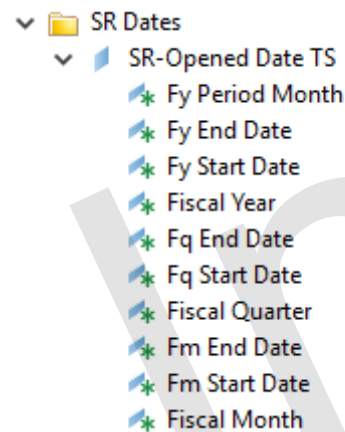
- Between vs.  $\geq$  and  $<$ 
  - Date between 7/1/2018 and 7/31/2018
    - Date Time Field
      - Between 7/1/2018 12:00:00 AM and 7/31/2018 12:00:00 AM
      - $\geq$  7/1/2018 12:00:00 AM and  $<$  8/1/2018 12:00:00 AM
    - Date Field Trunc (Date Time Field)
      - Between 7/1/2018 and 7/31/2018
      - $\geq$  7/1/2018 12:00:00 AM and  $<$  8/1/2018 12:00:00 AM

# DATE – MISCELLANEOUS ITEMS

- Date Indexing
  - Work with your DBA
  - Assure commonly used date fields are indexed
  - Important to index how it's used
    - `Trunc(SERVICE_REQUEST.SERVICE_REQUEST_OPENED_DATE)`

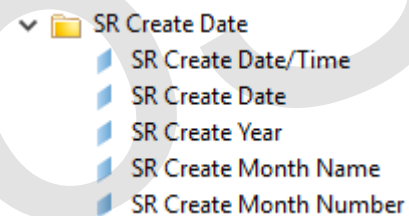
# DATE, DIMENSION VS. DETAIL

- Main date objects will always be dimensions
- For ancillary objects (year, quarter, etc.), they can either be a dimension or detail
  - Review - Details give more information about a dimension
- Why would we use one over another?



▼ SR Dates

- ▼ SR-Opened Date TS
  - \* Fy Period Month
  - \* Fy End Date
  - \* Fy Start Date
  - \* Fiscal Year
  - \* Fq End Date
  - \* Fq Start Date
  - \* Fiscal Quarter
  - \* Fm End Date
  - \* Fm Start Date
  - \* Fiscal Month



▼ SR Create Date

- SR Create Date/Time
- SR Create Date
- SR Create Year
- SR Create Month Name
- SR Create Month Number



# DATE TIME VS. DATE

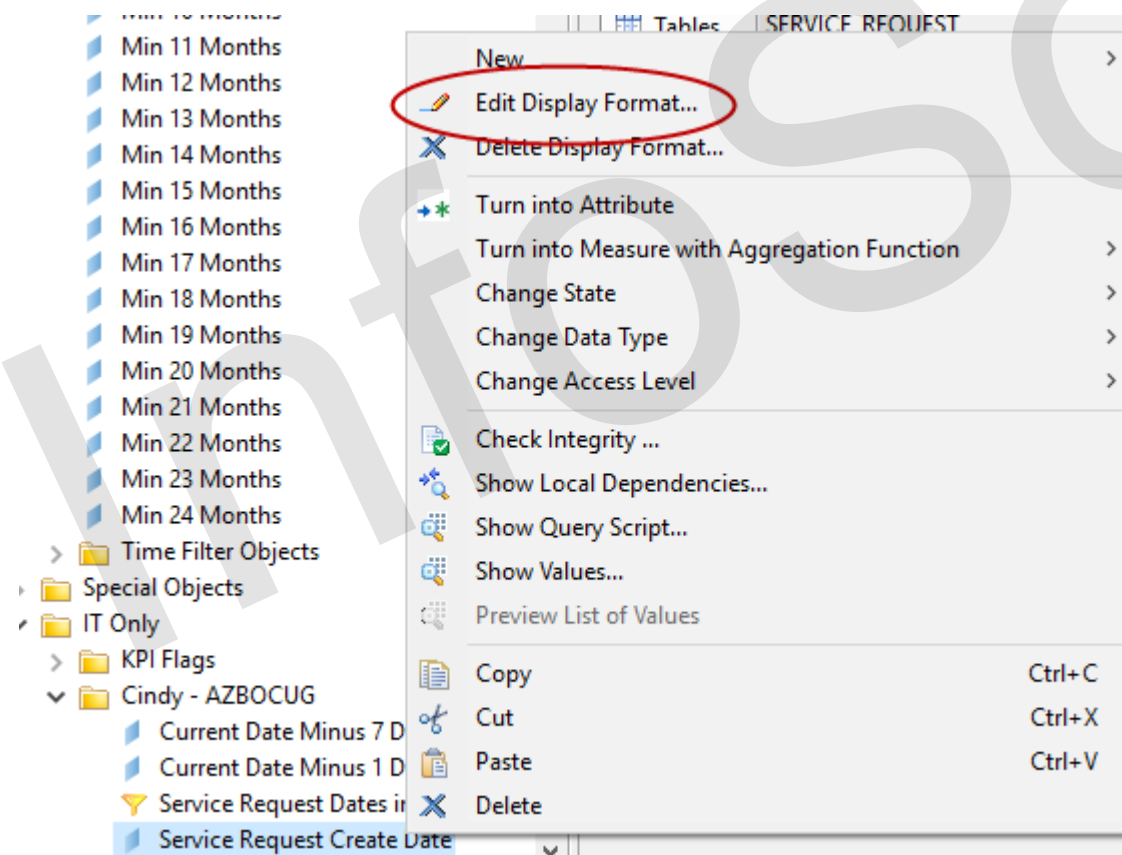
- With the release of 4.0, SAP added a new Data Type
- Prior to 4.0, we only had Date
- Now, we have both Date and Date/Time
- It is important to select the correct one, or you will get an error when used in a report

The screenshot shows the SAP configuration interface for a dimension named 'Service Request Create Date'. The 'Data Type' dropdown menu is open, showing options: Date, Date, DateTime, Long Text, Numeric, and String. The 'Date' option is selected. The 'SQL Definition' tab is active, showing the SQL query: `TRUNC(SYST.SERVICE_REQUEST_OPENED_DATE)`. The 'Description' field contains the text: 'This is the Date at the site when the Service Request was created. TI'.

Dimension: Service Request Create Date	
Name	Service Request Create Date
Description	This is the Date at the site when the Service Request was created. TI
Data Type	Date
SQL Definition	TRUNC(SYST.SERVICE_REQUEST_OPENED_DATE)
SELECT	

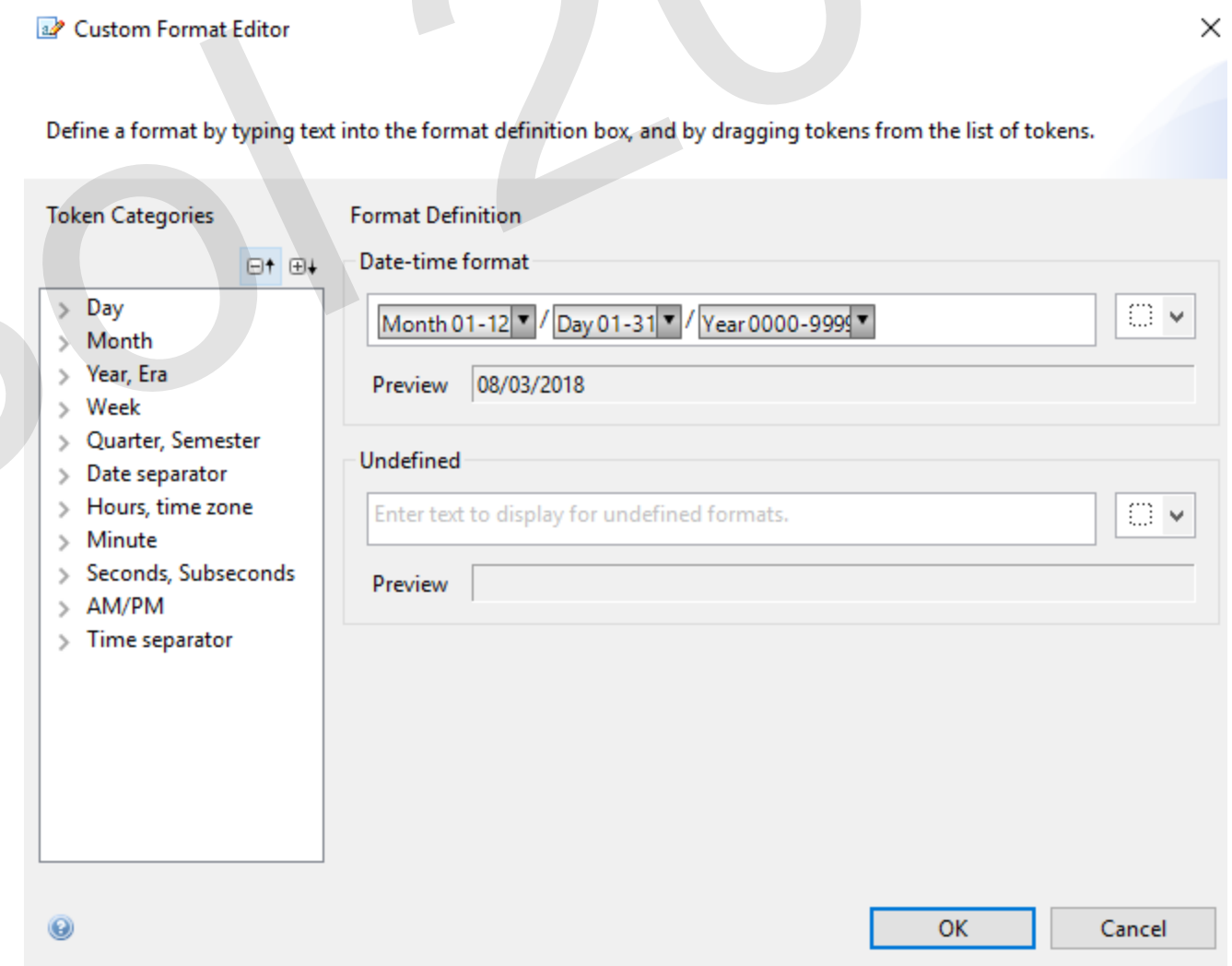
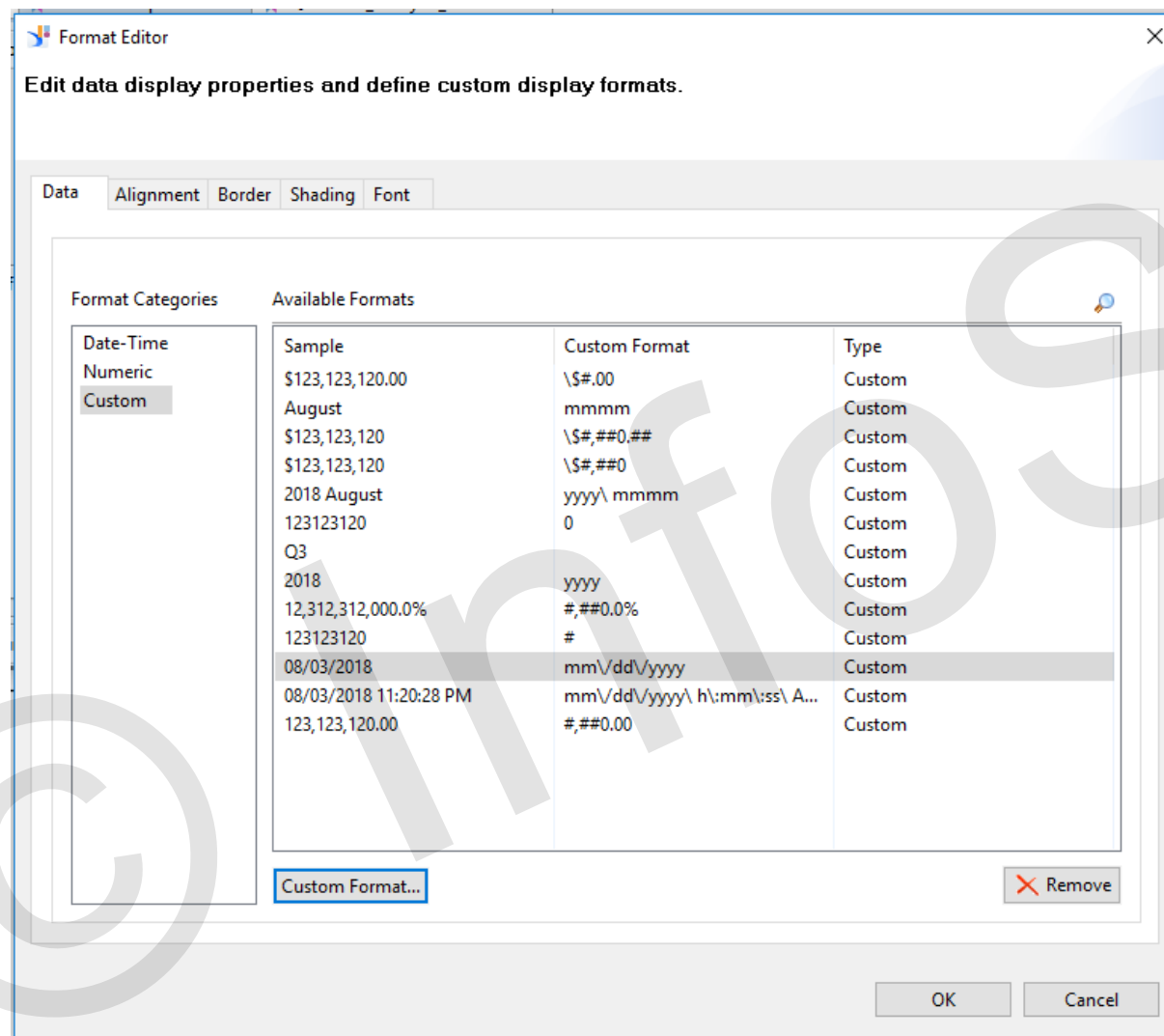
# DATE FORMATTING IN THE UNIVERSE

- You can format dates in the universe
- Eliminate need to format on the reports
- Right click on the object and select Edit Display Format



# DATE FORMATTING IN THE UNIVERSE - CONT'D

- Either select one of the predefined formats or create a custom format



# DATES – LIST OF VALUES

- Never allow a list of values on a date object in the universe

The screenshot shows the configuration interface for a date object named "Service Request Create Date". The "Data Type" is set to "Date". The "Access Level" is set to "Public". The "Object can be used in" section has checkboxes for "Results", "Conditions", and "Sort", all of which are checked. The "Database Format" section is visible at the bottom. On the right side, the "List of Values" section is highlighted with a red box. It contains a checkbox labeled "Associate List of Values" which is unchecked. Below this checkbox are two other unchecked checkboxes: "Force users to filter values before use" and "Allow users to search values in the database". The "Display" section is also visible, showing buttons for "Edit Display Format..." and "Delete", and radio buttons for "Default", "HTML", and "Hyperlink", with "Default" selected.

Name: Service Request Create Date

Description: This is the Date at the site when the Service Request was created. This object will prompt the user to select a date

Data Type: Date

SQL Definition | Keys | **Advanced** | Source Information | Custom Properties

Access Level

Accessible by users with Object Level Security not less than:

Public

Object can be used in

☒ Results

☒ Conditions

☒ Sort

Database Format

The format below determines the default regional settings. You can specify another format.

List of Values

☐ Associate List of Values

☐ Force users to filter values before use

☐ Allow users to search values in the database

Display

Use the buttons below to attach, edit, and remove a display format for this object. By default, the object has no format.

Edit Display Format... Delete

This object will be displayed as:

☒ Default ☐ HTML ☐ Hyperlink

Questions?