

Cognos Usage Data User Guide

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Cognos Usage Data Package

IBM Cognos provides a separate usage database to track usage of the Cognos system. It is helpful in determining usage by user ID, report runs, data content packages, report folder paths, and report run times. Below are the cautions of the database capabilities. You'll need to keep them in mind as you write usage data reports or create dashboards for trending.

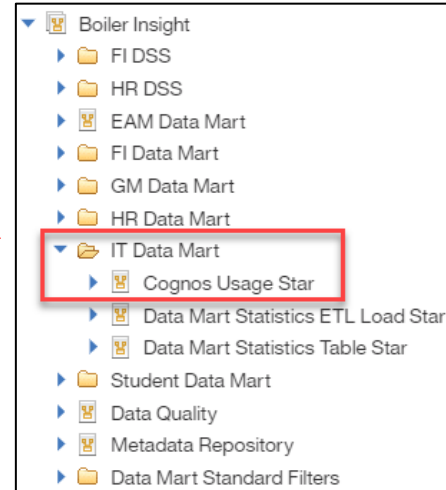
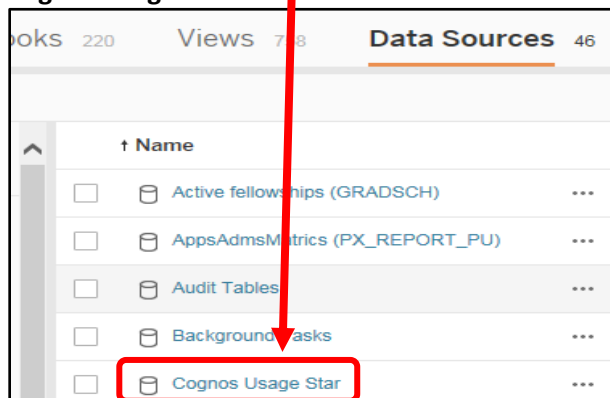
- Usage data begins on January 1, 2018
- Usage data cannot identify what are users doing with the data
- Usage data cannot project reporting needs not being met
- Usage data only reflects users who have run a report, not those who have never run a report.
- Usage data does not render time spent developing or editing reports.
- Usage data does not render unused reports as there is no usage.
- Usage data tracks a scheduled execution but not the schedule itself.
- Usage data is refreshed Monday through Friday in the evening hours.
- Usage data packages and security access are only provided for Cognos and Tableau reporting tools.
- Usage data security roles require the **BI Data IT Level 1** and a Cognos Tool license. Please reference the *Boiler Insight User Manual* to acquire the proper security roles and reporting license.

https://www.purdue.edu/bicc/documents/cognos/cognos_manuals/Boiler_Insight_Manual.pdf

Reporting with the Cognos Usage Data Packages

Usage data in Cognos is found in the **Boiler Insight** data package. When opening Authoring or Authoring Lite, select the **Boiler Insight** package. Open the **IT Data Mart** folder, and select the Cognos Usage Star.

Usage data for Tableau is found on the QA server at <https://qa.tableau.it.purdue.edu/#/datasources> titled **Cognos Usage Star**.



Note: if you do not see the Boiler Insight package or the Cognos Usage Star inside Boiler Insight, refer to the Boiler Insight User Manual referenced above to request the proper security roles).

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Additional Information Regarding Package Data

The Cognos Usage Data is contained in a separate database from Cognos with a granularity of one row per report execution, User ID, Date and Time.

Below is information on how report executions are handled for Report Views, Shortcuts and Schedules.

Report Views

- Report Views are counted as their own execution and displays the name the user provided.

rawlesc	10/7/2016	9:17 AM	Run Report	Report View of Usage Reports	/BICC/BI Analysts/Cheri/Usage Information	1
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Shortcuts

- Report Shortcuts are displayed as an execution of the original report. The content name displayed is the name of the original report, not the name of the report shortcut. In addition, the report path displayed in the data is the report path of where the original report resides, not where the report shortcut resides.

Usage Information on an execution of the Shortcut report:

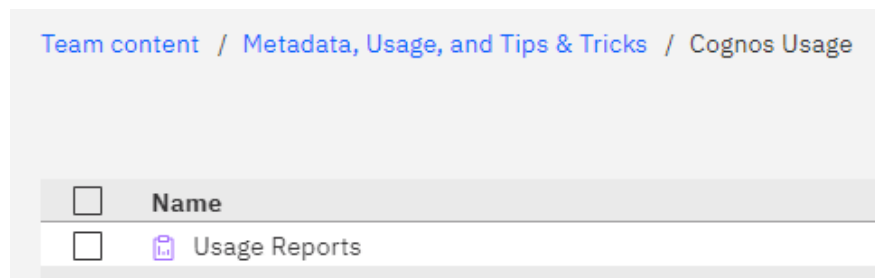
Run Report	Success	Report ReportService	2:13 PM	Usage Reports	/BICC/Cognos Usage Data Validation/Standard Reports/Cheri	1
------------	---------	----------------------	---------	---------------	---	---

The shortcut execution displays the Original Report Name (Usage Reports) and Original Report Location.

Schedules

- Schedule information is not identified in the Usage Star. A scheduled report is an execution of that report under the User ID of who owns the schedule. It is not identified as a scheduled report in the data.

For example, the BICC schedules the BI Content Catalog report to run on the first Tuesday of every month.



The schedule is owned by Cheri Rawles. This scheduled is tracked as an execution for Cheri Rawles.

User ID	Name Full	Date	Time	Source	Status	Target Type	Content Name	Content Path	Count
rawlesc	Rawles, Cheri L	10/3/2016	6:59 AM	Run Report	Success	Report BatchReportService	BI Content Catalog	/Boiler Insight/Standard Content/Metadata/Reports	1

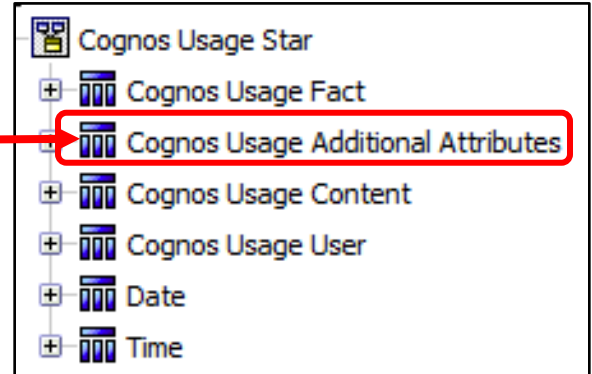
Using the Cognos Usage Star

COGNOS

The Cognos Usage data was built in a Star Schema for reporting via Cognos. This structure has joins pre-built so users are generally not required to create multiple joins in Cognos.

Each Dimension holds similar data that has already been pre-joined. Users can use any field within a single dimension in one query.

Single Dimension

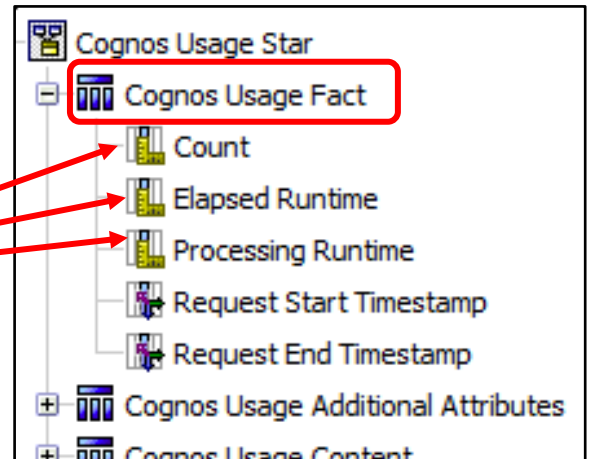


The Cognos Usage Star has as total of six dimensions.

In most cases users need to use fields from other dimensions on the same report. When crossing dimensions, drag a fact column into the query. This will create joins within the dimensions and still allow the use of one query.

In Cognos, fact dimensions will reside together in one folder.

Fact Attributes



TABLEAU

The Cognos Usage data for Tableau has also been pre-joined for ease of use. There are no restrictions when using the model's dimensions and facts

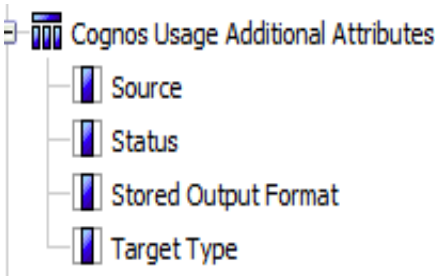
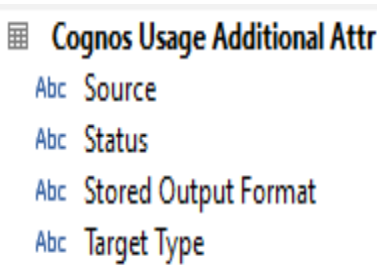
Cognos Usage Star Metadata

A completed list of the metadata explaining the detail data within the models can be found in [Data Cookbook](#).

Brief descriptions of the dimensions and their content are discussed in the following sections.

Cognos Usage Additional Attributes Dimension

The BICC has provided reporting models for both Cognos and Tableau use. The Cognos Usage Additional Attribute dimension includes detailed information on report specifics from the database.

Cognos Package View	Tableau Data View
	

Source:	Edit Query	Reports run while editing in Query Studio
	Run Report	Report Studio or Query Studio report runs
	View Report	Viewing saved output

Status:	Failure	Response with error code*
	Incomplete	No response from servers
	Success	Completed runs

Stored Output Format: Not generally used to report. Includes saved report output types (like CSV, HTML, PDF, XLS)

Target Type: Not generally used to report. (See *Filter Options to Consider*)
































Status: Represents if an execution was successful, failed, or incomplete.

*In addition, if a user “Cancels” a request at any point during an execution, the status will display as “Failure”.

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Cognos Usage Content Dimension

The Cognos Usage Content dimension includes detailed information on reports, report paths, and data packages. The BICC derived additional fields for clarity. Fields not generally recommended for use are noted below.

Cognos Package View	Tableau Data View
 Cognos Usage Content <ul style="list-style-type: none">  Content Alternate Name  Content Name  Content Name Native  Content Path  Content Path Folder 01  Content Path Folder 02  Content Path Folder 03  Content Path Folder 04  Content Path Folder 05  Content Path Folder 06  Content Path Folder 07  Content Path Folder 08  Content Path Folder 09  Content Path Folder 10  Content Path Native  Content Type  Package Name  Package Path  Package Path Folder 01  Package Path Folder 02  Package Path Folder 03  Package Path Folder 04  Package Path Folder 05  Package Path Folder 06  Package Path Folder 07  Package Path Folder 08  Package Path Folder 09  Package Path Folder 10  Package Path Native 	 Cognos Usage Content <ul style="list-style-type: none"> Abc Content Alternate Name Abc Content Name Abc Content Name Native Abc Content Path Abc Content Path Folder 01 Abc Content Path Folder 02 Abc Content Path Folder 03 Abc Content Path Folder 04 Abc Content Path Folder 05 Abc Content Path Folder 06 Abc Content Path Folder 07 Abc Content Path Folder 08 Abc Content Path Folder 09 Abc Content Path Folder10 Abc Content Path Native Abc Content Type Abc Package Name Abc Package Path Abc Package Path Folder 01 Abc Package Path Folder 02 Abc Package Path Folder 03 Abc Package Path Folder 04 Abc Package Path Folder 05 Abc Package Path Folder 06 Abc Package Path Folder 07 Abc Package Path Folder 08 Abc Package Path Folder 09 Abc Package Path Folder 10 Abc Package Path Native

Content Alternate Name: Not generally used to report, internal

Content Name: Report name

Content Name Native: Not generally used to report, internal

Content Path: Full folder path to report

Content Path Folder 01 through 10: Folders, one level at a time, to report

Content Path Native: Not generally used to report, internal

Content Type: Denotes report and output type, not generally used to report

Package Name: Data origin

Package Path: Folder paths where package is being used

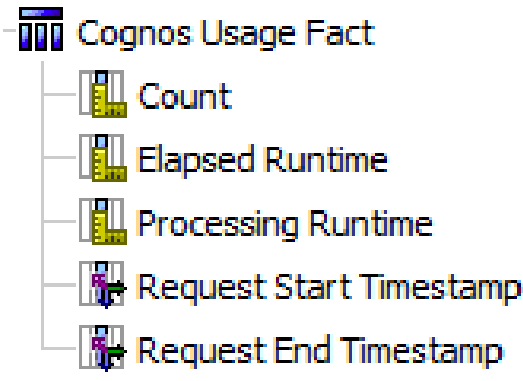
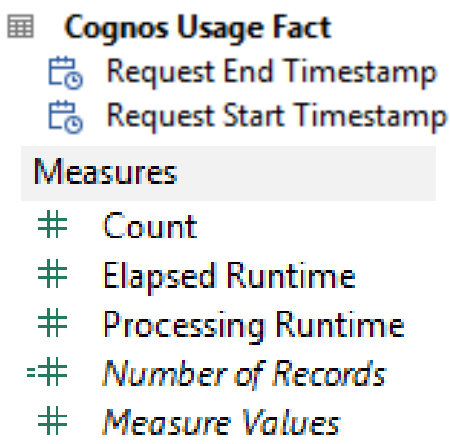
Package Path Folder 01 through 10: Package folders, one level at a time

Package Path Native: Not generally used to report, internal

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Cognos Usage Fact Dimension

The Cognos Usage Fact dimension includes detailed facts on dates, times, and measures. Cognos displays all facts under the Cognos Usage Fact, while Tableau displays date and time as a dimension and Runtimes and count as Measures.

Cognos Package View	Tableau Data View
 <p>Cognos Usage Fact</p> <ul style="list-style-type: none"> Count Elapsed Runtime Processing Runtime Request Start Timestamp Request End Timestamp 	 <p>Cognos Usage Fact</p> <ul style="list-style-type: none"> Request End Timestamp Request Start Timestamp <p>Measures</p> <ul style="list-style-type: none"> Count Elapsed Runtime Processing Runtime Number of Records Measure Values

Count: Total rows used

Request End Timestamp: Displays specific time report completed processing

Request Start Timestamp: Displays specific time report started processing

Elapsed Runtime: Time between start and end dates of a request (in seconds)

Processing Runtime: Total runtime of all steps that make up the request (in seconds)

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Cognos Usage Users Dimension

The Cognos Usage Users dimension was combined with Employee data from Boiler Insight HR data mart to provide user names, campus, organization units and employee groups, along with position and job information.

Cognos Package View	Tableau Data View
<ul style="list-style-type: none"> Cognos Usage User <ul style="list-style-type: none"> Campus Data Digest Detailed Job Report Group Employee Group Employee Subgroup Full Time Part Time HR Organizational Unit Name Job ID Job Title Name Full Name Sort Organizational Unit ID Organizational Unit Name Position ID Position Title User ID 	<ul style="list-style-type: none"> Cognos Usage Users <ul style="list-style-type: none"> Abc Campus Abc Data Digest Detailed Job Report Group Abc Employee Group Name Abc Employee Subgroup Name Abc Full Time Part Time Abc HR Organization Unit Name Abc Job ID Abc Job Title Abc Name Full Abc Name Sort Abc Organizational Unit ID Abc Organizational Unit Name Abc Position ID Abc Position Title Abc User ID

Users may experience null values when utilizing the Cognos Usage User dimension. This dimension contains fields from the HR data mart Employee dimension, with the exception of User ID which is directly from the Cognos usage data table. The Employee fields are Type 1 fields and do not contain history; only current employee information. Since historical changes are not retained, the employee fields are null for some User IDs.

For example, if an employee changes their User ID at some point, the “old” User ID (drakeml) will not have any related employee information. Therefore, the Employee fields related to the “old” User ID will be null. The Employee information will be attached to the new User ID (mdrake).

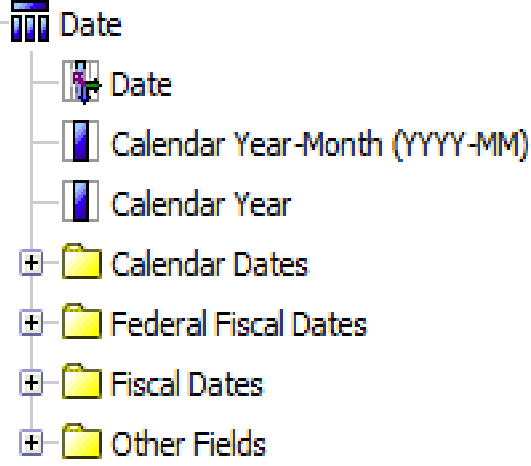

User ID ▲	Organizational Unit ID	Organizational Unit Name	Employee Group
drakeml			
mdrake	00000145	Purdue Polytechnic Institute Admin	Mgmt/Prof

Since the HR data is only pulling current employee data, there are issues with using the Cognos Usage User dimension values.

- User IDs that do not have a current record in SAP HR, will display as Null values in Tableau **IF** the report is based on fields in Cognos Usage User dimension with the exception of User ID.
- In Cognos, when users filter the data on the Employee fields, the Null value rows are excluded.
- All Null user rows will appear **IF** the report is based on Cognos Usage Content dimension and/or Cognos Usage Additional Attribute dimension data.

Date Dimension

The Cognos Usage Data package contains multiple options for displaying dates for your reporting. Cognos and Tableau handle the fields in different ways.

Cognos Package View	Tableau Data View
	

Tip: Using the fact value, Request Start Timestamp, is an easy way to render desired date/times in Tableau.

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Time Dimension

The Cognos Usage Data package contains multiple options for displaying time in your reporting. Cognos and Tableau handle the fields in different ways.

Cognos Package View	Tableau Data View
<ul style="list-style-type: none"> Time <ul style="list-style-type: none"> Time Seconds Of Minute Minute Of Hour Hour Of Day 24 Hour Of Day 12 Half Hour Half Hour of Day Quarter Hour Quarter Hour Of Day AM-PM Indicator Time Display 24 Time Display 12 Time Display Sec 24 Time Display Sec 12 Time Display Hour 24 Time Display Hour 12 Time Display Half Hour 24 Time Display Half Hour 12 Time Display Quarter Hour 24 Time Display Quarter Hour 12 	<ul style="list-style-type: none"> Time <ul style="list-style-type: none"> AM-PM Indicator Half Hour Half Hour Of Day Hour Of Day 12 Hour Of Day 24 Minute Of Hour Quarter Hour Quarter Hour Of Day Seconds Of Minute Time Display 12 Time Display 24 Time Display Half Hour 12 Time Display Half Hour 24 Time Display Hour 12 Time Display Hour 24 Time Display Quarter Hour 12 Time Display Quarter Hour 24 Time Display Sec 12 Time Display Sec 24 Time Key Data Source Version Measure Names

Tip: Using the fact value, Request Start Timestamp, is an easy way to render desired date/times in Tableau.

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Grouping Options to Consider

Much of the data in the Cognos Usage tables is very complex for use in reporting. In reviewing the data, the BICC has created groupings for two of the values to simplify the output. SQL code has been provided for both Tableau and Cognos reporting for creating a new field for Content Type.

- **Folder Content Type** – categorizes business areas by their standard report folders (Standard, Departmental, Shared, My Folders)

COGNOS CALCULATION FOR FOLDER CONTENT TYPE GROUPING

```

if (
([Cognos Usage Star].[Cognos Usage Content].[Content Path Folder 01] = 'Standard' and [Cognos Usage Star].[Cognos Usage Content].[Content Path Folder 02] = 'Grants Management') or
([Cognos Usage Star].[Cognos Usage Content].[Content Path Folder 01] = 'Student - PWL' and [Cognos Usage Star].[Cognos Usage Content].[Content Path Folder 02] = 'Validated') or
([Cognos Usage Star].[Cognos Usage Content].[Content Path Folder 01] = 'Student - PWL' and [Cognos Usage Star].[Cognos Usage Content].[Content Path Folder 02] = 'Standard') or
([Cognos Usage Star].[Cognos Usage Content].[Content Path Folder 01] = 'Boiler Insight' and [Cognos Usage Star].[Cognos Usage Content].[Content Path Folder 02] = 'Standard Content') or
([Cognos Usage Star].[Cognos Usage Content].[Content Path Folder 01] = 'Standard' and [Cognos Usage Star].[Cognos Usage Content].[Content Path Folder 02] = 'Grants Management') or
([Cognos Usage Star].[Cognos Usage Content].[Content Path Folder 01] = 'University Development' and [Cognos Usage Star].[Cognos Usage Content].[Content Path Folder 02] = 'Global Reports'))
then ('Standard')

else if (
([Cognos Usage Star].[Cognos Usage Content].[Content Path Folder 01] = 'Boiler Insight' and [Cognos Usage Star].[Cognos Usage Content].[Content Path Folder 02] = 'Departmental Content') or
([Cognos Usage Star].[Cognos Usage Content].[Content Path Folder 01] = 'University Development' and [Cognos Usage Star].[Cognos Usage Content].[Content Path Folder 02] = 'Appeal Wizard') or
([Cognos Usage Star].[Cognos Usage Content].[Content Path Folder 02] = 'Development Services') or
([Cognos Usage Star].[Cognos Usage Content].[Content Path Folder 02] = 'Fundraiser Units') or
([Cognos Usage Star].[Cognos Usage Content].[Content Path Folder 02] = 'Information Services'))
then ('Departmental')

else if (
([Cognos Usage Star].[Cognos Usage Content].[Content Path Folder 01] = 'Boiler Insight' and [Cognos Usage Star].[Cognos Usage Content].[Content Path Folder 02] = 'Shared Content') or
([Cognos Usage Star].[Cognos Usage Content].[Content Path Folder 01] = 'University Development' and [Cognos Usage Star].[Cognos Usage Content].[Content Path Folder 02] = 'Interactive and Targeted Reports') or
([Cognos Usage Star].[Cognos Usage Content].[Content Path Folder 02] = 'Purdue Custom AP Reports and Dashboards'))
then ('Shared')
else ('Unknown')

```

TABLEAU CALCULATION FOR CONTENT TYPE GROUPING

```
// Standard
```

```
IF (  
  ([Content Path Folder 01] = 'Boiler Insight' and [Content Path Folder 02] = 'Standard Content') OR  
  ([Content Path Folder 01] = 'Standard' and [Content Path Folder 02] = 'Grants Management') OR  
  ([Content Path Folder 01] = 'Student - PWL' and [Content Path Folder 02] = 'Validated') OR  
  ([Content Path Folder 01] = 'Student - PWL' and [Content Path Folder 02] = 'Standard Content') OR  
  ([Content Path Folder 01] = 'University Development' and [Content Path Folder 02] = 'Global Reports') OR  
  ([Content Path Folder 01] = 'University Development' and [Content Path Folder 02] = 'Summarized Fundraising and  
Analysis')  
) THEN 'Standard'
```

```
// Departmental
```

```
ELSEIF (  
  ([Content Path Folder 01] = 'Advancement Performance') OR  
  ([Content Path Folder 01] = 'BICC') OR  
  ([Content Path Folder 01] = 'BICC Audit Reports') OR  
  ([Content Path Folder 01] = 'Boiler Insight') OR  
  ([Content Path Folder 01] = 'Boiler Insight Transport') OR  
  ([Content Path Folder 01] = 'Coeus') OR  
  ([Content Path Folder 01] = 'Enterprise Shared Content') OR  
  ([Content Path Folder 01] = 'Enterprise') OR  
  ([Content Path Folder 01] = 'Financial Aid-PWL') OR  
  ([Content Path Folder 01] = 'OE Audit Reports') OR  
  ([Content Path Folder 01] = 'Operational Data Store Reports') OR  
  ([Content Path Folder 01] = 'Packages - ODS Admin') OR  
  ([Content Path Folder 01] = 'Samples') OR  
  ([Content Path Folder 01] = 'Samples_Prompt_API') OR  
  ([Content Path Folder 01] = 'SGHE Advancement Performance') OR  
  ([Content Path Folder 01] = 'Standard') OR  
  ([Content Path Folder 01] = 'Student - PWL') OR  
  ([Content Path Folder 01] = 'University Development')  
) THEN 'Departmental/Shared'
```

```
ELSE 'My Folder'
```

```
END
```

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- **Package Path** – categorizes data package content by subject (Boiler Insight, GM AIMS, Other, Student, UD). SQL code has been provided for both Tableau and Cognos reporting for creating a new field for Package Path.

COGNOS CALCULATION FOR PACKAGE PATH

```
IF ([Cognos Usage Star].[Cognos Usage Content].[Package Path Folder 01] = 'Standard') THEN ('GM AIMS')
ELSE IF ([Cognos Usage Star].[Cognos Usage Content].[Package Path Folder 01] = 'Boiler Insight') THEN ('Boiler Insight')
ELSE IF ([Cognos Usage Star].[Cognos Usage Content].[Package Path Folder 01] = 'University Development') THEN
('University Development')
ELSE IF ((([Cognos Usage Star].[Cognos Usage Content].[Package Path Folder 01] = 'Financial Aid-PW') OR ([Cognos Usage
Star].[Cognos Usage Content].[Package Path Folder 01] = 'Student - PWL')) THEN ('Student')
else ('Unknown')
```

TABLEAU CALCULATION FOR PACKAGE PATH

```
IF [Package Path Folder 01] = "Standard" THEN "GM AIMS"
ELSEIF [Package Path Folder 01] = "Boiler Insight" THEN "Boiler Insight"
ELSEIF [Package Path Folder 01] = "University Development" THEN "University Development"
ELSEIF [Package Path Folder 01] = "Financial Aid-PWL" OR [Package Path Folder 01] = "Student - PWL" THEN "Student"
else "Other"
END
```

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Required Filters

Cognos Usage tables capture some values that are irrelevant to the user data and can skew the values in reporting. ***The BICC requires users to filter the columns below to properly capture usage counts.***

- **Source** – remove **View Report** records where the Content Name is null as these contain multiple, irrelevant or null rows created when a user opens a saved report to view.
 - **View Report** – can contain multiple, irrelevant or null rows created when a user opens a saved report view.
 - **Null** – records where **Content Name** is null for **View Reports**.

COGNOS FILTER FOR SOURCE

Filter is required!

Expression Definition:

```
not([Cognos Usage Star].[Cognos Usage Additional Attributes].[Source]
= 'View Report' and [Cognos Usage Star].[Cognos Usage Content].[Content
Name] is null)
```

TABLEAU FILTER FOR SOURCE

Filter is required!

1. **Create** a calculated column and name it **View Reports Null Filter**.

View Reports Null Filter

```
if(ISNULL([Content Name]) and [Source] = 'View Report') THEN ('Remove')
ELSE ('Valid')
END
```

2. **Drag** the new field, **View Reports Null Filter**, to the **Filters shelf**.
3. **Select** the check box next to **Valid** and click **OK**.

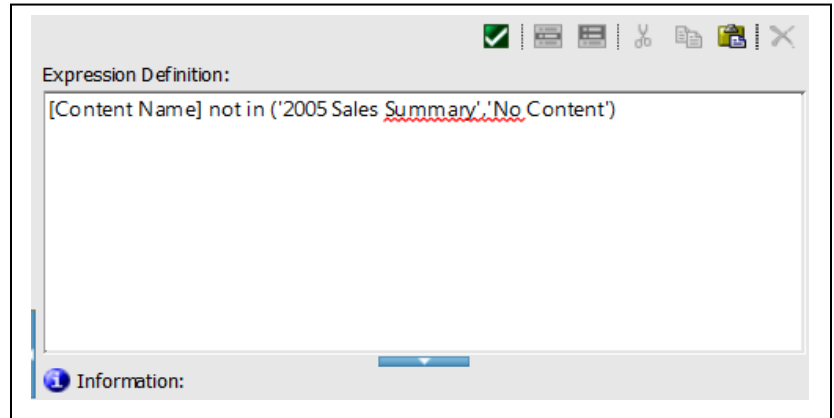
General	Wildcard	Condition	Top
<input checked="" type="radio"/> Select from list <input type="radio"/> Custom value list <input type="radio"/> Use all			
Enter search text			
<input type="checkbox"/> Remove			
<input checked="" type="checkbox"/> Valid			

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- **Content Name** – Remove the following value types in Content Name.
 - **2005 Sales Summary** – system generated report used by Purdue IT
 - **No Content** – a value added to Content Name by the BICC when both the Content Path and Package Path fields are null. This potentially represents situations where Cognos is not capturing the data due to system problems.

COGNOS FILTER FOR CONTENT NAME

Filter is required!



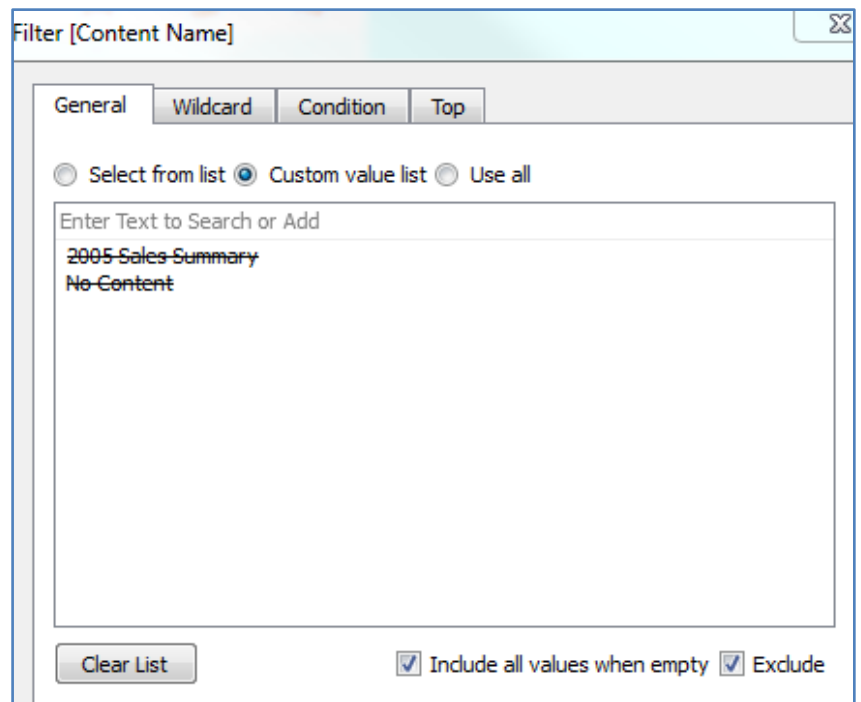
Expression Definition:

[Content Name] not in ('2005 Sales Summary', 'No Content')

Information:

TABLEAU FILTER FOR CONTENT NAME

Filter is required!



Filter [Content Name]

General Wildcard Condition Top

☐ Select from list ☒ Custom value list ☐ Use all

Enter Text to Search or Add

2005 Sales Summary
No Content

Clear List

☒ Include all values when empty ☒ Exclude

Optional Filters

- **Content Name** – remove the following if necessary
 - **adHocReport & Null** – these values in Content Name indicate **authoring development, generally indicates a report being run, but not saved.**

COGNOS FILTER FOR CONTENT NAME

Filter is optional.

Expression Definition:

```
not([Cognos Usage Star].[Cognos Usage Content].[Content Name]
='adHocReport' or [Cognos Usage Star].[Cognos Usage Content].[Content
Name] is null)
```

TABLEAU FILTER FOR CONTENT NAME

When using Tableau, filtering on all four values **is highly recommended!**

If reporting specifically on development/ad hoc usage content, only filter **2005 Sales Summary** and **No Content**.

Filter [Content Name]

General Wildcard Condition Top

☐ Select from list ☒ Custom value list ☐ Use all

Enter Text to Search or Add

Null
2005 Sales Summary
adHocReport
No Content

Clear List

☒ Include all values when empty ☒ Exclude