

## Release Notes

### Azure Cost Management Power BI Template

V1.0

09/24/2020

(GitHub) SAP on Azure Scripts

<https://github.com/Azure/SAP-on-Azure-Scripts-and-Utilities>

## Table of Contents

1.	Introduction .....	2
2.	Release History.....	3
2.1	V1.0 - 09/24/2020 (Initial Release).....	3
3.	Steps for using Azure Cost Management Power BI Template .....	6
4.	Azure TagGING Override Methodology for Applications and Cost Centers .....	7
5.	References.....	8
6.	Troubleshooting .....	9

## Release Notes Azure Cost Management Dashboard

### 1. INTRODUCTION

The purpose of this document is to describe the creation/fix/enhancement made to Azure Cost Management Power BI Template. The Power BI Template is based on the following Azure Cost Management APIs -

#### **Azure Cost Management connector for Power BI (v2)**

<https://docs.microsoft.com/en-us/power-bi/connect-data/desktop-connect-azure-cost-management>

#### **Azure Cost Consumption API v2**

<https://docs.microsoft.com/en-us/rest/api/consumption/>

You can use the Azure Cost Management connector for Power BI Desktop to make powerful, customized visualizations and reports that help you better understand your Azure spend. The Azure Cost Management connector currently supports customers with a [Microsoft Customer Agreement](#) or an [Enterprise Agreement \(EA\)](#).

The Azure Cost Management connector uses OAuth 2.0 for authentication with Azure and identifies users who are going to use the connector. Tokens generated in this process are valid for a specific period. Power BI preserves the token for the next login. OAuth 2.0, is a standard for the process that goes on behind the scenes to ensure the secure handling of these permissions. To connect, you must use an [Enterprise Administrator](#) account for Enterprise Agreements, or a [Billing account owner](#) for Microsoft Customer Agreements.

## Release Notes Azure Cost Management Dashboard

### 2. RELEASE HISTORY

#### 2.1 V1.0 - 09/24/2020 (Initial Release)

No	Module	Description	New/ Fix/ Enhancement
1	Summary	Daily Cost, 30-Day Forecast, 365-Day Forecast Cost Summary by Month Summary and Drill Down by Azure Meter Category, Sub-Category, Meter, Resource Group, Resource Daily Average Cost Cost by Environment (e.g. Dev/Test, UAT, Prod) Business Unit Cost Allocation Monthly Balance and Marketplace Purchases	New
2	Period and Monthly Cost and Usage KPIs	Daily Average 30-Day  Cost (Daily Average 30D) = CALCULATE( SUM('API v2 - Usage'[Cost (Actual)]) / 30, DATESBETWEEN('API v2 - Usage'[Date], MAX('API v2 - Usage'[Date]) - 30, MAX('API v2 - Usage'[Date]) ) )	New
3	Application Usage and Cost	Customer cost management by application Tag By Application By Application Component Tag (e.g. SAP ECC, SAP	New
4	Meter Detail		New
5	Networking Usage and Costs		New
6	Azure Databricks Cost Management		New
7	Cost Center Analysis	Daily Cost by Cost Center, Export view for Finance Teams	New
8	Cost Comparison	Cost Comparison by Meter Category Hierarchy Daily Cost Comparison Weekly Cost Comparison	New

## Release Notes Azure Cost Management Dashboard

9	Reservations	<p>Reservation Cost Analysis</p> <p>Reservation Charges</p> <p>Reservation Usage</p> <p>Reservation Purchases by Week</p>	New
10	Region Management Analysis	<p>Cost and</p> <p>Azure Usage and Cost Analysis by Region</p>	
11	Price Sheet	<p>Price Sheet Validation</p> <p>Enrollment Discounts</p> <p>Price Sheet and Product SKU Lookup</p> <p>See Also</p> <p><a href="#">Pricing Calculator   Microsoft Azure</a></p>	New
12	Azure Advisor and Recommendations	<p>View of Azure Advisor Recommendations. The Azure Advisor views are driven by an export from the Azure Advisor Recommendations in the Azure Portal (<a href="https://portal.azure.com">https://portal.azure.com</a>)</p> <p>Cost</p> <p>Performance</p> <p>Security</p> <p>Reliability</p> <p>Operational Excellence</p> <p>See Also</p> <p>To Export Azure Advisor Recommendations - <a href="#">How to export an Azure Advisor recommendation report - Bing video</a></p>	New
13	Power BI Parameters	<p>Report Level Parameters configured by Customer the customer. These parameters drive the location of subscription, metadata, access to the Azure Cost Management API, and the # of months of data.</p> <p>Enrollment ID (API v1) ***</p> <p>Azure Subscription Metadata = %PATH%</p> <p>Months – Usage (2)</p> <p>Months – Summary (6)</p> <p>Months – Budgets (12)</p> <p>Months – Reservations (24)</p> <p>Months – Reservation (6)</p> <p>Azure Advisor = %PATH%</p> <p>See Also</p> <p>Power BI Query Parameters - <a href="#">Deep Dive into Query Parameters and Power BI Templates   Microsoft Power BI Blog   Microsoft Power BI</a></p>	New

## Release Notes Azure Cost Management Dashboard

14	Drill-Down Hierarchy Levels for Cost Management and Analysis	<p>Application Hierarchy</p> <p>Application</p> <p>Subscription</p> <p>Meter Category</p> <p>Meter Subcategory</p> <p>Resource Group</p> <p>Resource</p> <p>Application Region Hierarchy</p> <p>Application</p> <p>Region</p>	New
15	Tables	<div> <div> <p>Queries [30]</p> <ul style="list-style-type: none"> <li>Billing API [1] <ul style="list-style-type: none"> <li>API - Summaries</li> </ul> </li> <li>Billing API v2 [11] <ul style="list-style-type: none"> <li>API v2 - Usage</li> <li>API v2 - Usage Amortized</li> <li>API v2 - Balance summary</li> <li>API v2 - Budgets</li> <li>API v2 - RI Charges</li> <li>API v2 - RI Usage</li> <li>API v2 - RI Usage Summary</li> <li>API v2 - RI Recommendation (Single)</li> <li>API v2 - RI Recommendation (Shared)</li> <li>API v2 - Price Sheets</li> <li>API v2 - Reservations (Unique)</li> </ul> </li> <li>Subscription Metadata [9] <ul style="list-style-type: none"> <li>Metadata - Adjustments</li> <li>Metadata - Azure Advisor</li> <li>Metadata - Azure Subscriptions</li> <li>Metadata - Application Override</li> <li>Metadata - Cost Center Override</li> <li>Metadata - Meter Classification</li> <li>Metadata - Price Sheet Validation</li> <li>Metadata - Regions</li> <li>Metadata - Resource Location</li> </ul> </li> <li>Parameters [9] <ul style="list-style-type: none"> <li>Enrollment ID</li> <li>Months - Usage (1)</li> <li>Months - Summary (1)</li> <li>Months - Budgets (3)</li> <li>Months - Reservations (3)</li> <li>Azure Advisor (C:\Users\Rob\Microsoft\SAP Azure Powe...</li> <li>Azure Subscriptions (C:\Users\Rob\Microsoft\SAP Azure...</li> <li>Subscription Metadata (C:\Users\Rob\Microsoft\SAP Azu...</li> <li>Price Sheet Validation (C:\Users\Rob\Microsoft\SAP Azu...</li> </ul> </li> <li>Other Queries</li> </ul> </div> <div> <p>Azure Consumption Insights API (v1)</p> <p>Azure Cost Management API (v2)</p> <p>Subscription Metadata</p> <p>Power BI Template Parameters</p> </div> </div> <p>Note: API – Summaries is a v1 table from Azure Consumption Insights API.</p>	New

### 3. STEPS FOR USING AZURE COST MANAGEMENT POWER BI TEMPLATE

- 1) Download Cost Management Template from Github

[SAP-on-Azure-Scripts-and-Utilities/Costmanagement-Dashboard at master · Azure/SAP-on-Azure-Scripts-and-Utilities · GitHub](#)

- 2) Obtain Customer PBI Key for Consumption Insights (v1)

This is required for the “API – Summaries” Table

This table is not available in the Azure Cost Management API (v2)

[Connect to Azure Consumption Insights data in Power BI Desktop - Power BI | Microsoft Docs](#)

- 3) Grant Power BI Access for Azure Cost Management connector for Power BI (v2)

[Connect to Azure Cost Management data in Power BI Desktop - Power BI | Microsoft Docs](#)

- 4) Open Power BI Template (PBIT)

- 5) Update all Parameters

- 6) Update Subscription Metadata (Financial Best Practices)

- 7) Apply PBI Template with Customer Color Scheme (Power BI Theme)

[Use report themes in Power BI Desktop - Power BI | Microsoft Docs](#)

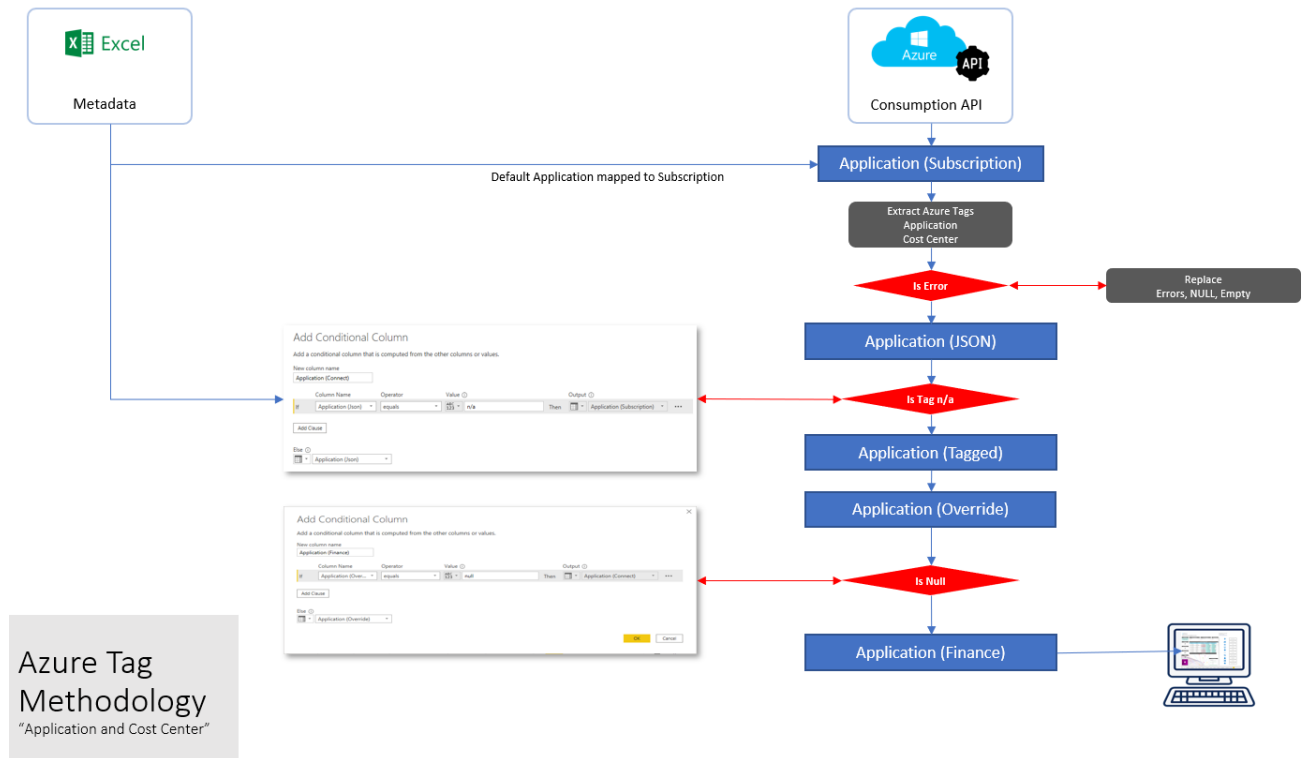
- 8) Download Azure Advisor and Recommendations from Azure Portal

[How to export an Azure Advisor recommendation report - Bing video](#)

- 9) Fine Tune for specific Customer Requirements

## Release Notes Azure Cost Management Dashboard

### 4. AZURE TAGGING OVERRIDE METHODOLOGY FOR APPLICATIONS AND COST CENTERS



## Release Notes Azure Cost Management Dashboard

### 5. REFERENCES

Understanding Azure Reservations

[Understand Azure reservations usage for Enterprise Agreements | Microsoft Docs](#)

Azure Cost Management

[Connect to Azure Cost Management data in Power BI Desktop - Power BI | Microsoft Docs](#)

Incremental Refresh with Power BI Premium

[Incremental refresh in Power BI - Power BI | Microsoft Docs](#)

Refresh Power BI Reports Programmatically (Github Blog dubracik/pbixrefresher-python)

[GitHub - dubravcik/pbixrefresher-python: Refresh Power BI reports programmatically for free](#)

Understanding Microsoft Customer Agreement Administrative Roles in Azure

[Billing roles for Microsoft Customer Agreements - Azure | Microsoft Docs](#)

Refresh Power BI Datasets using Microsoft Flow

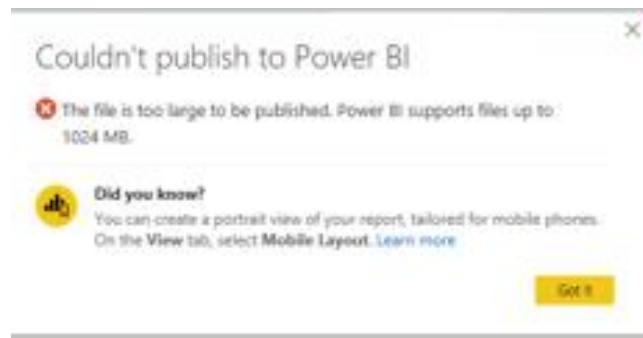
[Refresh your Power BI dataset using Microsoft Flow | Microsoft Power BI Blog | Microsoft Power BI](#)



## Release Notes Azure Cost Management Dashboard

### 6. TROUBLESHOOTING

#### 6.1 Power BI Pro Publish Limit – 1024 MB



[PowerBI Data Refresh Limitations & Restrictions for Pro and Premium user \(gigxp.com\)](https://gigxp.com/PowerBI-Data-Refresh-Limitations-Restrictions-for-Pro-and-Premium-user/)

#### 6.2 API v2 Connection Error

```
DataSource.Error: Web.Contents failed to get contents from
'https://management.azure.com/providers/Microsoft.Billing/billingAccounts/83294316
/providers/Microsoft.Consumption/reservationdetails?api-version=2019-05-
01&$filter=properties/UsageDate+ge+2020-07-01+AND+properties/UsageDate+le+2020-08-
04' (400): Bad Request
Details:
    DataSourceKind=AzureCostManagement
    DataSourcePath=Enrollment Number;9999999
    Url=https://management.azure.com/providers/Microsoft.Billing/billingAccounts/8
3294316/providers/Microsoft.Consumption/reservationdetails?api-version=2019-05-
01&$filter=properties/UsageDate+ge+2020-07-01+AND+properties/UsageDate+le+2020-08-
04
```