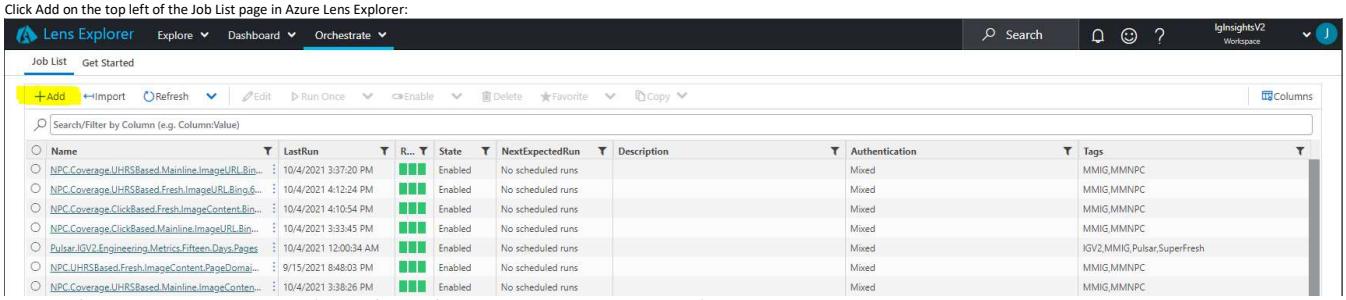
For kKibana to ADE + IcM

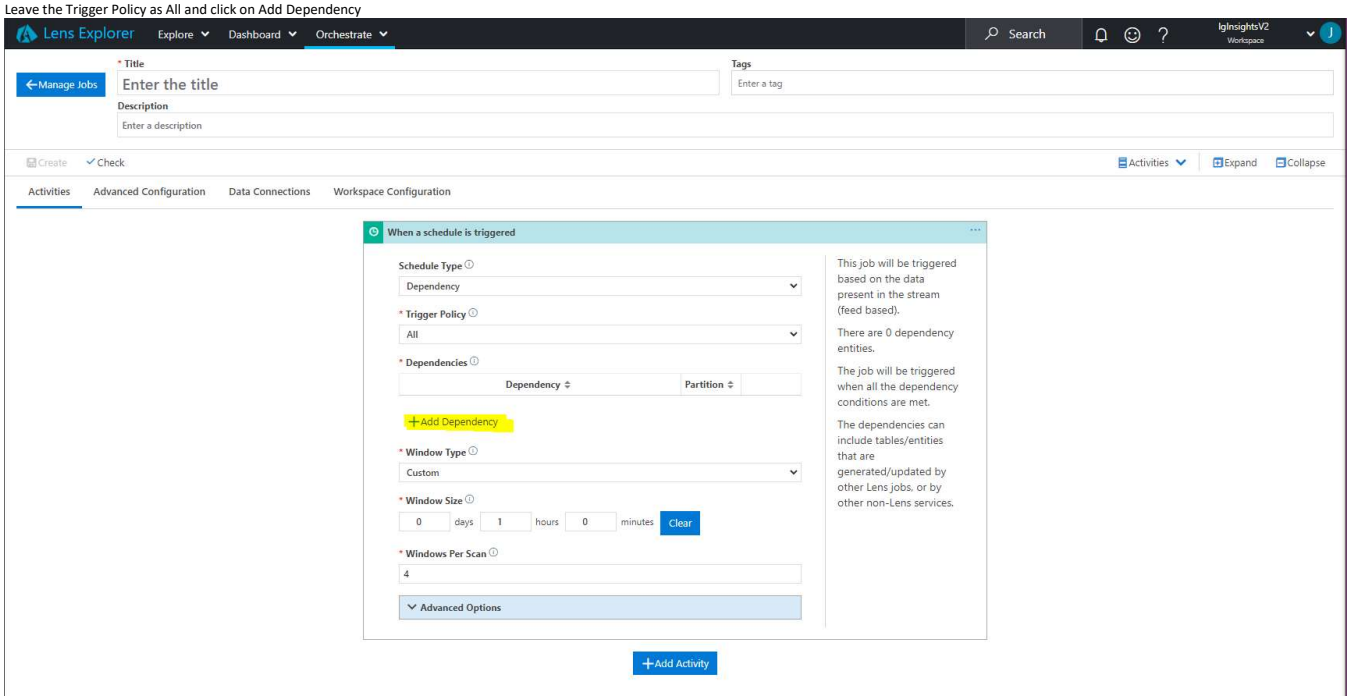
Friday, October 1, 2021 5:39 PM

Moving Data from Cosmos Stream to Kusto Table

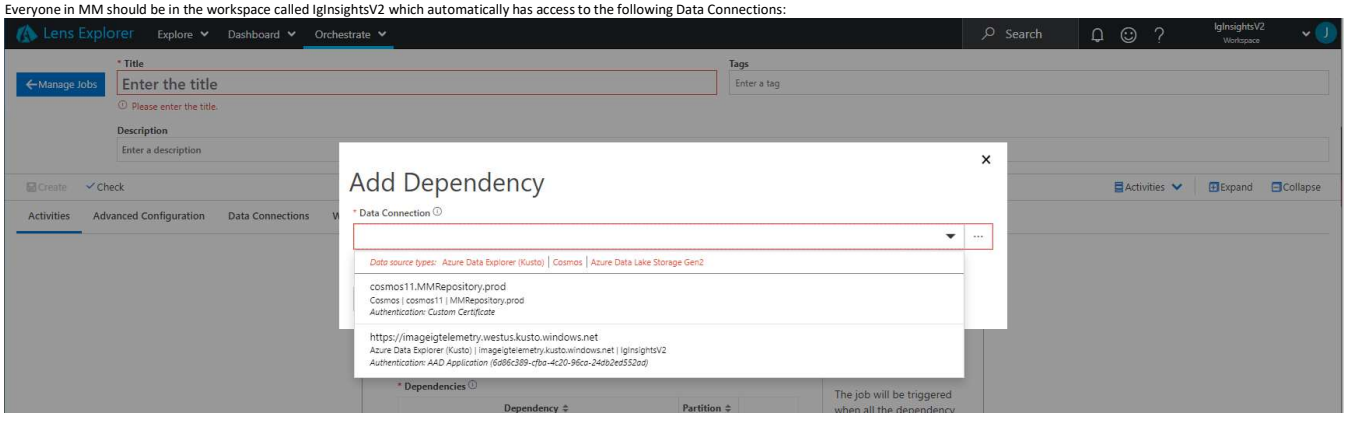
1. Find your Cosmos data stream in Source Status - Data Insights (ap.gbl) (ex: Pulsar IGV2 Engineering Metrics Fifteen Days - Page
2. Before we can inject the Cosmos data stream into Kusto, we need to make sure that the stream has a Date column of type DateTime (COSMOS cosmos/MMRepository.prod/local/Prod/Image/Metrics/Superfresh/Reports/Pulsar/2021_1001/EngineeringUniversalGDI_FifteenDays/EngineeringGoldenSetCovereage-Page.ss (osdinfra.net))
3. Within Azure Lens Explorer, create an ingestion job from Cosmos to Kusto
   1. Click Add on the top left of the Job List page in Azure Lens Explorer:



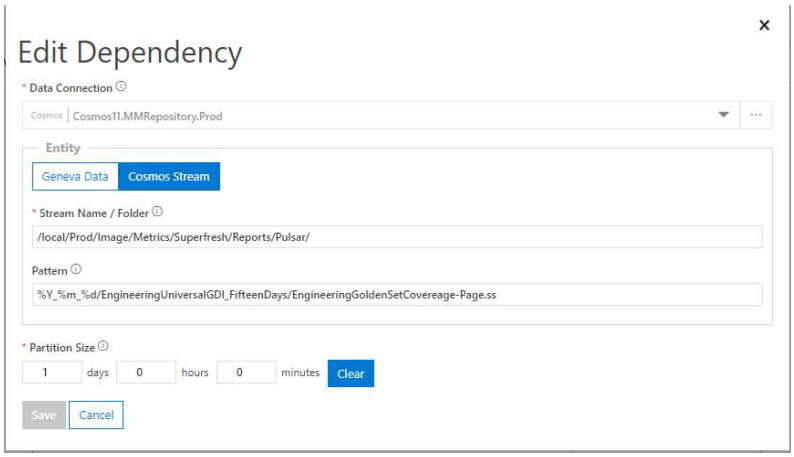
   2. Enter a title for your Cosmos to Kusto ingestion job (add Tags for easier filtering and sorting later in the Job List page)
   3. Set the Schedule Type to Dependency meaning that the ingestion job will trigger everytime a new Cosmos stream is created
   4. Leave the Trigger Policy as All and click on Add Dependency



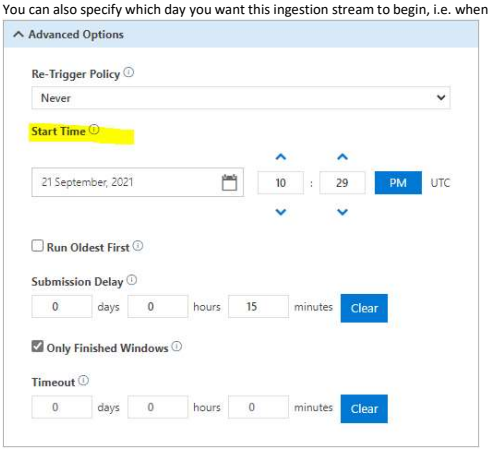
   5. Everyone in MM should be in the workspace called IgInsightsV2 which automatically has access to the following Data Connections:



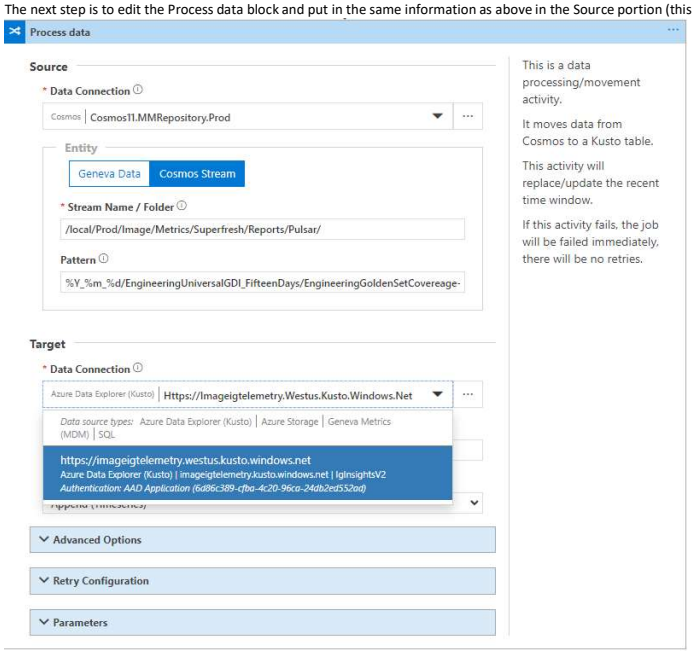
   6. Put in your Cosmos stream in here following the example shown in the following screenshot



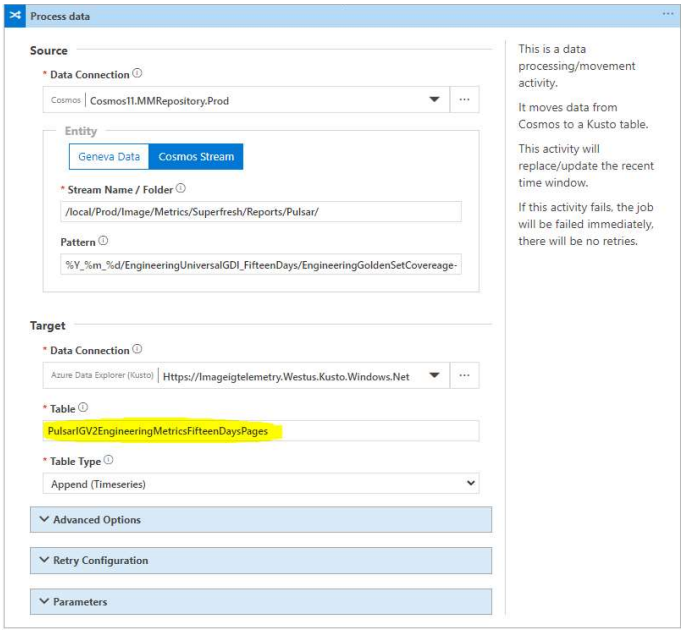
7. You can also specify which day you want this ingestion stream to begin, i.e. when to start backfilling



8. The next step is to edit the Process data block and put in the same information as above in the Source portion (this is the Cosmos data stream you are injecting) and then make sure to select the correct Kusto data connection (imageigtelemetry)

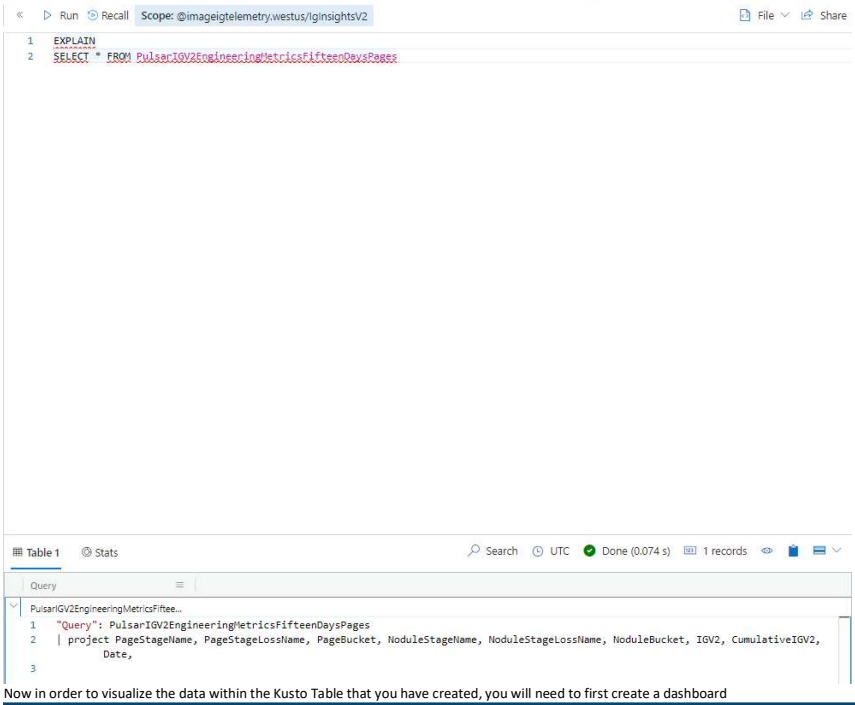


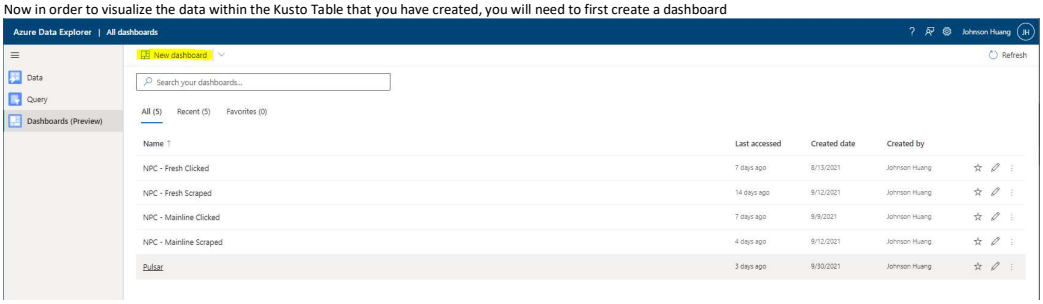
9. Now you can specify the name of the table that you want the data to ingest to, note that it cannot contain special cahracters such as '-' or '.'



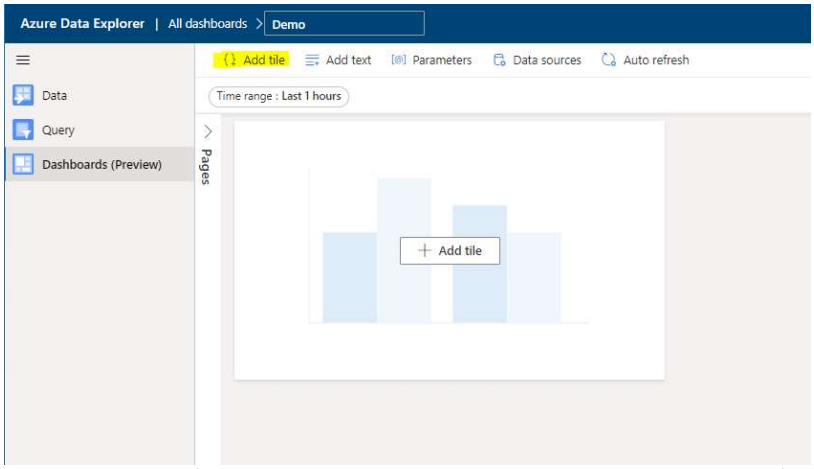
10. Once you press Save this lens explorer job will automatically start to scan the Cosmos stream path you have provided and begin ingesting data into the Kusto table. (easiest way to chceck is through imageigtelemetry.westus.IgInsightsV2 | Azure Data Explorer, your table should appear under imageigtelemetry.westus - IgInishgtsV2

Visualizing in Azure Data Explorer [See below for visualization in Jarvis]

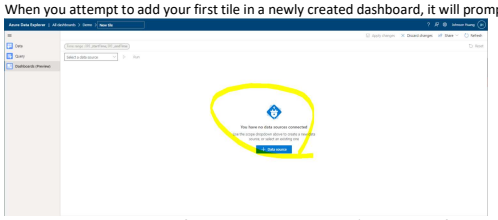
1. Now that the Cosmos data is in Kusto, we can start to visualize the data in the table
2. A good way to learn how to write Kusto queries is to use the command EXPLAIN, this allows you to type SQL queries and have them translated directly to Kusto Query Language
3. 

4. Now in order to visualize the data within the Kusto Table that you have created, you will need to first create a dashboard


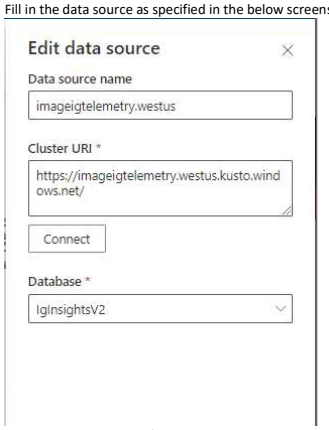
5. And you want to click add tile to start creating individual visulizations



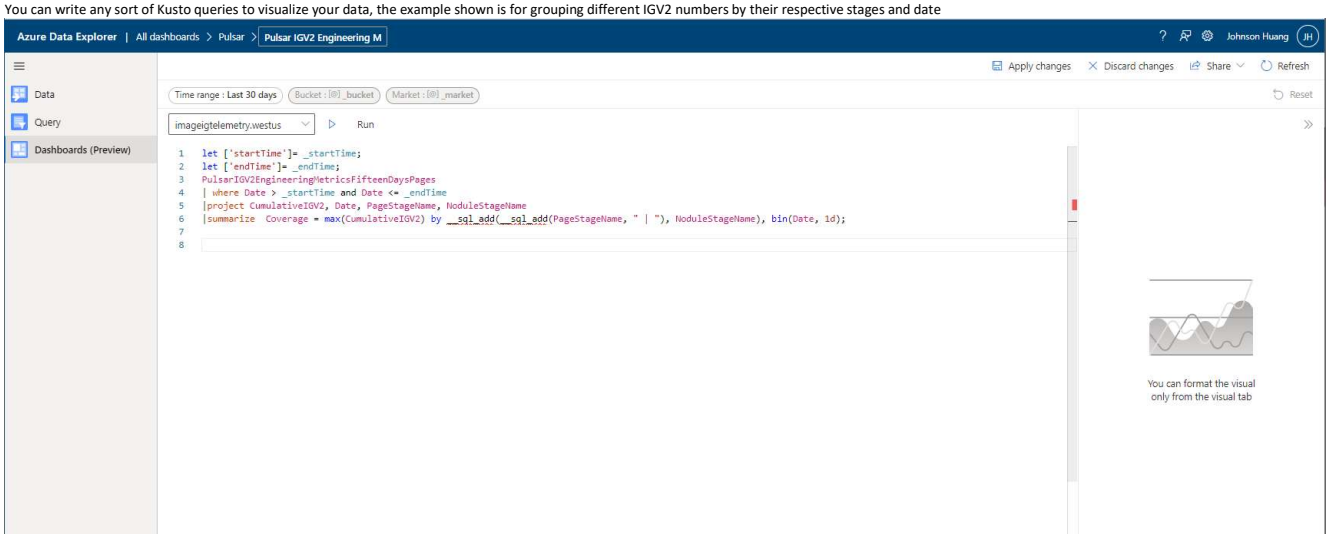
6. When you attempt to add your first tile in a newly created dashboard, it will prompt you to connect the said dashboard to a specific data source



7. Fill in the data source as specified in the below screenshot (this is the configuration for our team's workspace but you can have a different Database if you desire)



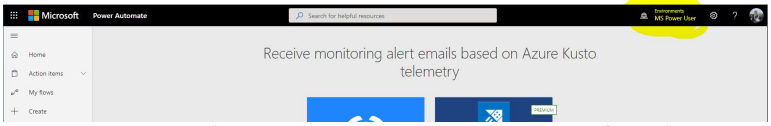
8. You can write any sort of Kusto queries to visualize your data, the example shown is for grouping different IGV2 numbers by their respective stages and date



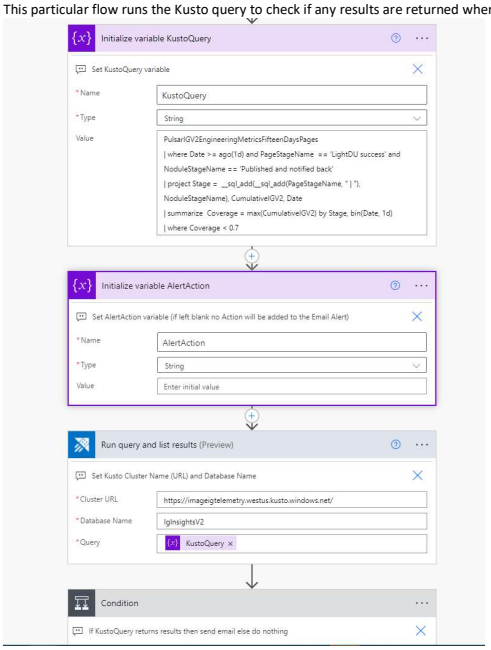
9. You can choose from a variety of different graphs as well as parameters, more info here: Visualize data with the Azure Data Explorer dashboard | Microsoft Docs

Setting up Icm & Email Alerts

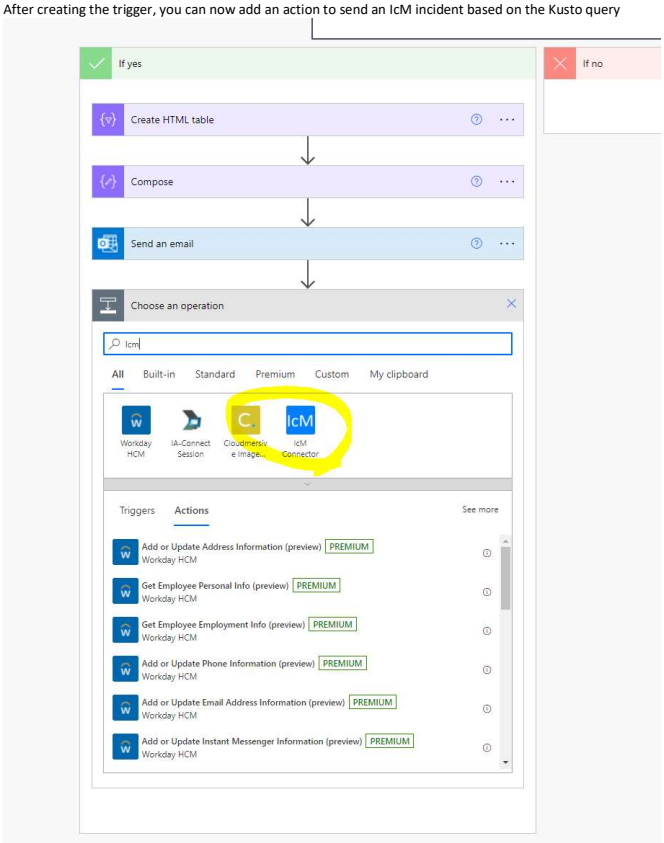
1. We use Microsoft Flow to automate alerts (Icm/email)
2. Flow uses multiple Connectors to create a flow of actions that are interdependent on each other
3. If you are looking for email alerts only, you can use this template to create email alerts based on a Kusto query: Receive monitoring alert emails based on Azure Kusto telemetry | Microsoft Power Automate
4. In order to automatically create IcM tickets, we will need to gain access to the Flow environment MS Power User (the old IcM connector was deprecated: Power Automate IcM Connector Deprecation (microsoft.com))
5. A new connector has been rewritten by the CSEO team (MS Digital Power Platform and Dynamics Governance - CSEO Power Platform Wiki - Home (sharepoint.com)
6. Follow the insturctions here to gain access for MS Power User: MS Digital Power Platform and Dynamics Governance - CSEO Power Platform Wiki - Home (sharepoint.com)
7. Access will be granted between 24-48 hours, once you have access, make sure to switch your environment to MS Power User before attempting to create a Flow using IcM connector



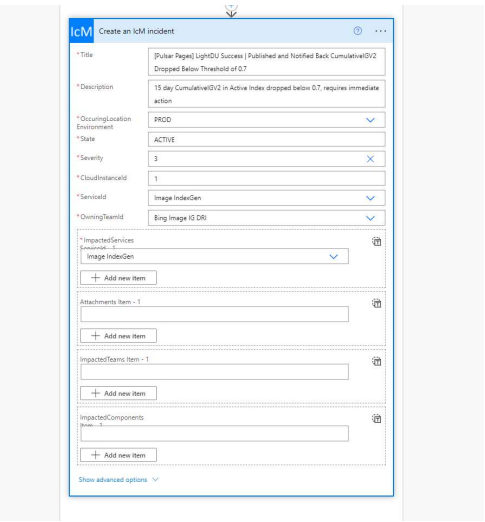
8. Using the same template as above (Receive monitoring alert emails based on Azure Kusto telemetry | Microsoft Power Automate), write the appropriate Kusto query that will trigger an alert like the one below
9. This particular flow runs the Kusto query to check if any results are returned where the cumulative IGV2 of the Pulsar Page level table drops below 0.7, if it does then we will trigger the flow to send an email + open an IcM incident



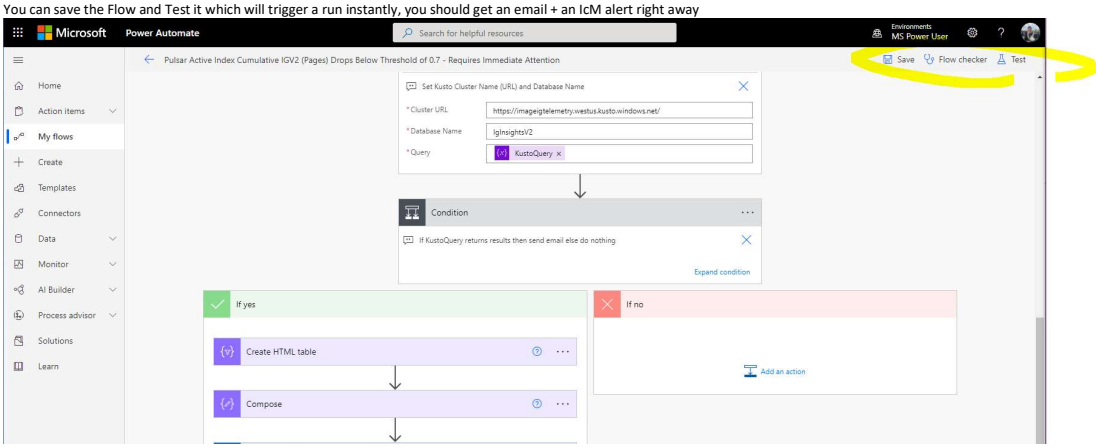
10. After creating the trigger, you can now add an action to send an IcM incident based on the Kusto query



11. Fill in the apprpriate IcM incident info, this particular one triggers when cumulative IGV2 for Pulsar pages drop below 0.7



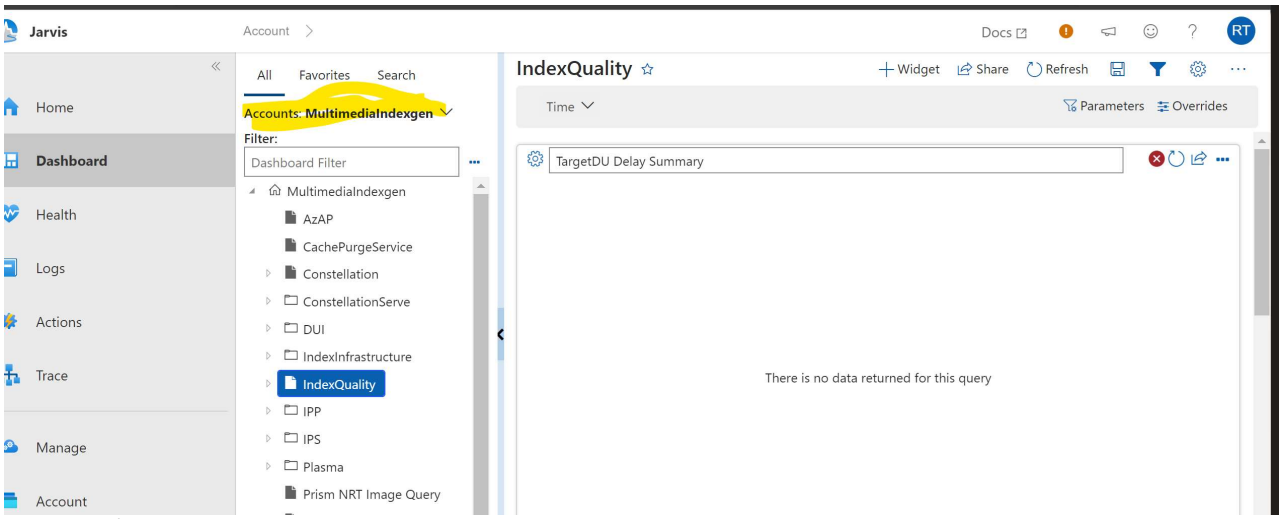
12. You can save the Flow and Test it which will trigger a run instantly, you should get an email + an IcM alert right away



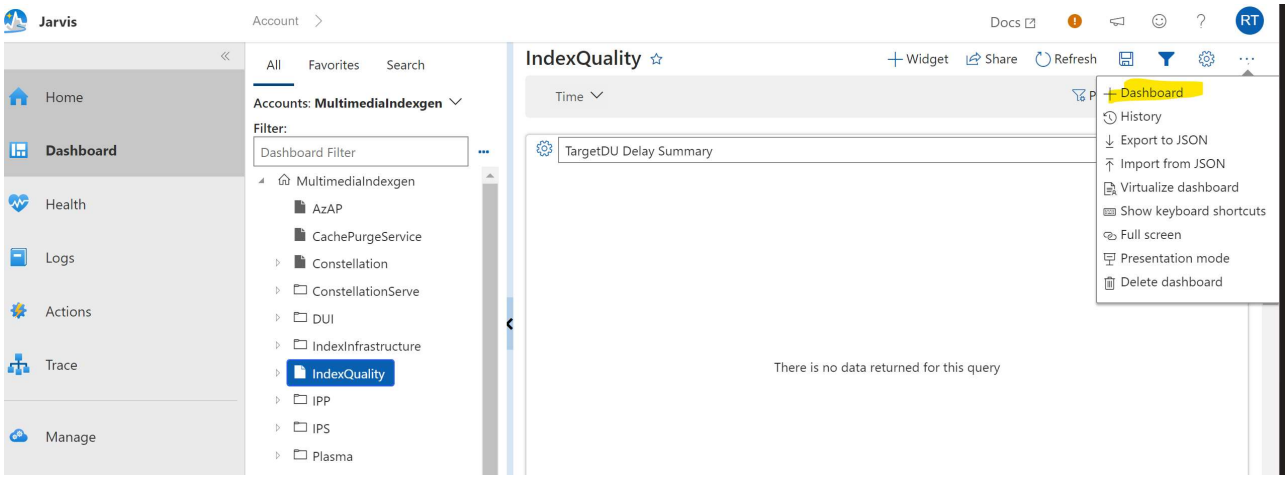
Scope for Data Command in Lens Explorer to add a DateTime column to existing cosmos stream while ingesting:

```
#DECLARE PulsarIGV2Pages string = "/local/Prod/Image/Metrics/Superfresh/Reports/Pulsar/" + @@startDateTime@@.Substring(0, @@startDateTime@@.IndexOf(" ")).Replace("-", "_") +
"/EngineeringUniversalGDI_FifteenDays/EngineeringGoldenSetCovereage-Page.ss";
#DECLARE PulsarIGV2PagesOutput string = "/local/Prod/Image/Metrics/Superfresh/Reports/Pulsar/" + @@startDateTime@@.Substring(0, @@startDateTime@@.IndexOf(" ")).Replace("-", "_") +
"/EngineeringUniversalGDI_FifteenDays/EngineeringGoldenSetCovereage-Page_Test.ss";
Pulsar = SELECT *, @@startDateTime@@.Substring(0, @@startDateTime@@.IndexOf(" ")).Replace("-", "_") AS DateString FROM (SSTREAM @PulsarIGV2Pages);
Pulsar = SELECT *, DateTime.Parse(DateString.Replace("_", "-")).Date AS Date FROM Pulsar;
Pulsar = SELECT *.Except(DateString) FROM Pulsar;
OUTPUT TO SSTREAM @PulsarIGV2PagesOutput;
```

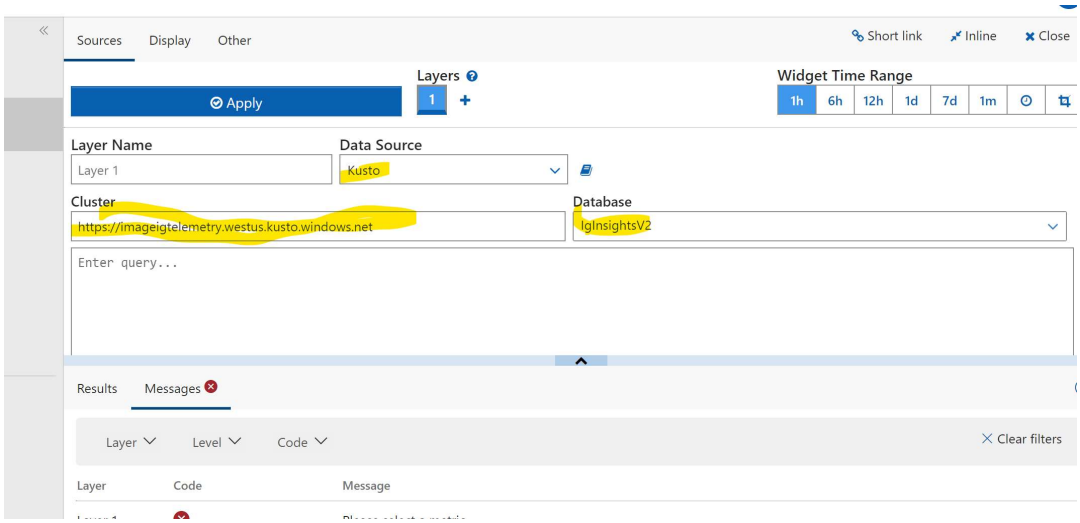
VISUALIZATION IN JARVIS

1. Click on accounts and select the desired account .
2.


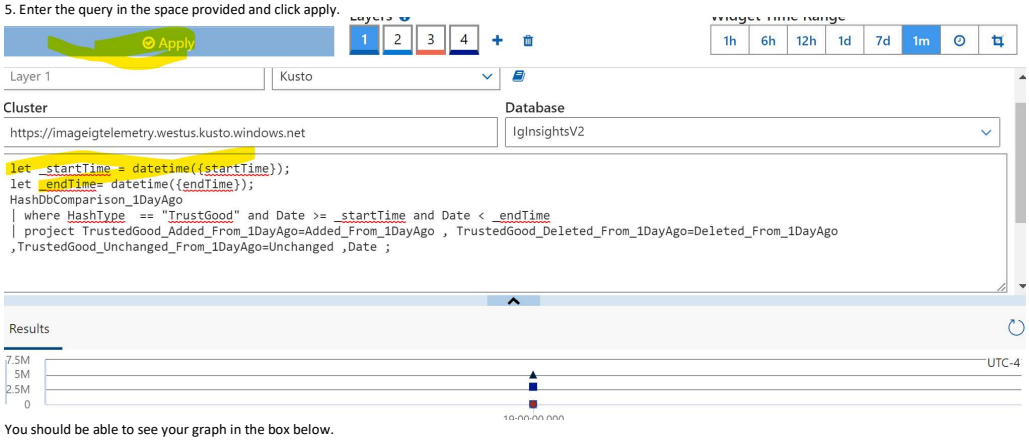
3. Select the desired folder under which you want to create the dashboard.
4. On the top right corner click on the 3 dots and select 'New DashBoard"

5. 

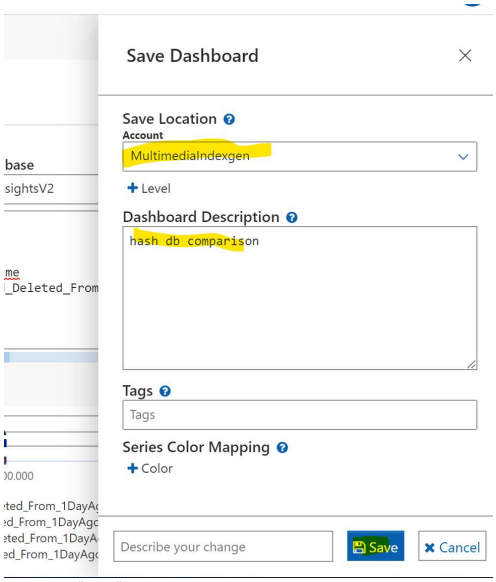
4. Change the
Data Source to "Kusto"
Cluster to "
https://imageigtelemetry.westus.kusto.windows.net"
And select the desired data base

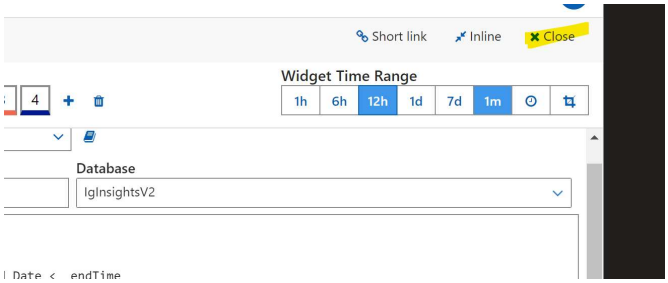


5. Enter the query in the space provided and click apply.



5. You should be able to see your graph in the box below.
6. In order to save it press control+s . Fill in the account , dashboard decription and click on save.
7.

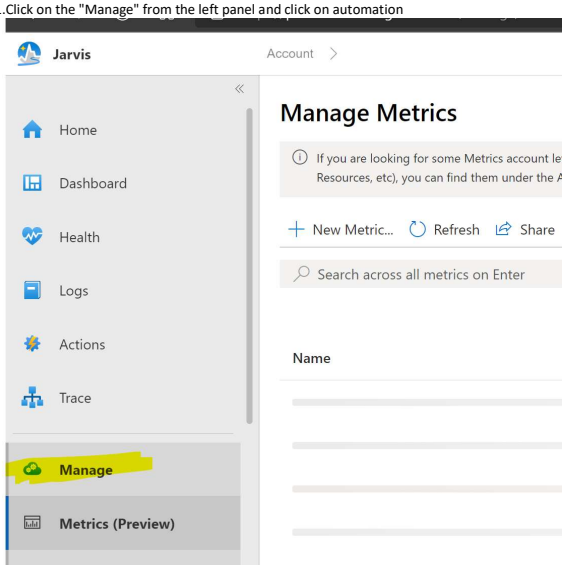
8. 

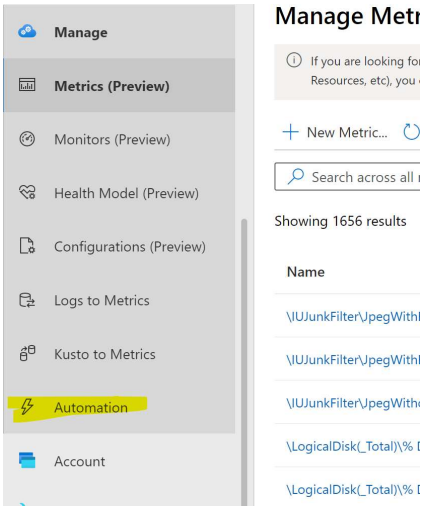
8. Click on the "Close"button on the top right hand corner and view your dashboard.
9. 

10.

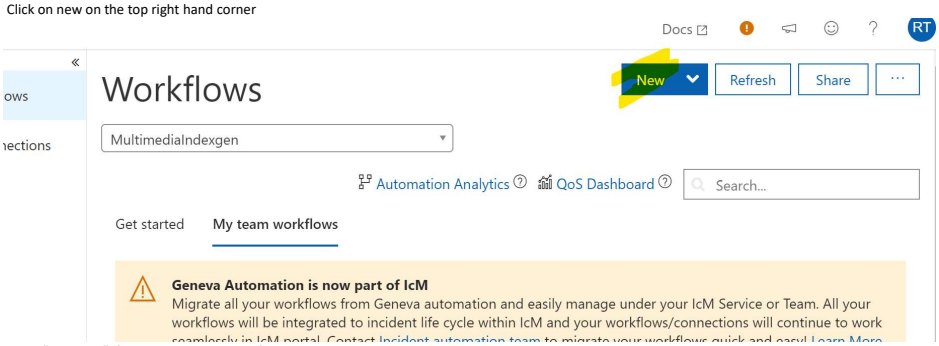
ICM Creation

1.Click on the "Manage" from the left panel and click on automation

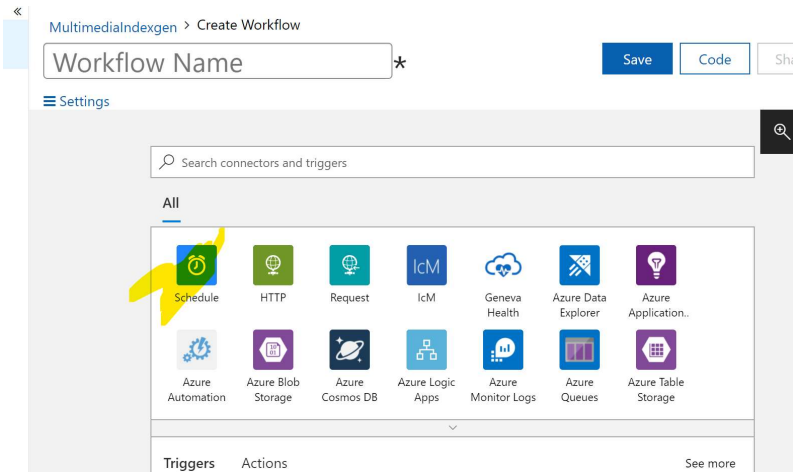




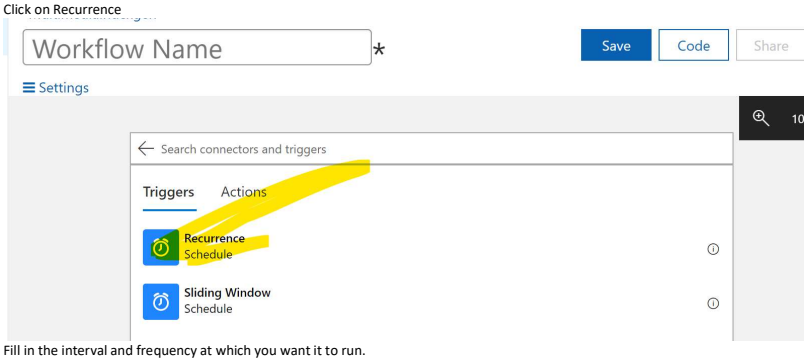
2. Click on new on the top right hand corner



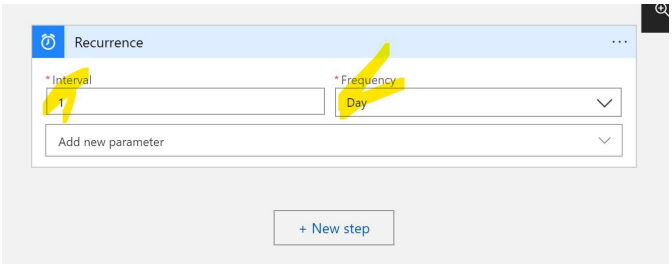
3. Select "Schedule" if you require your workflow to trigger at a certain time



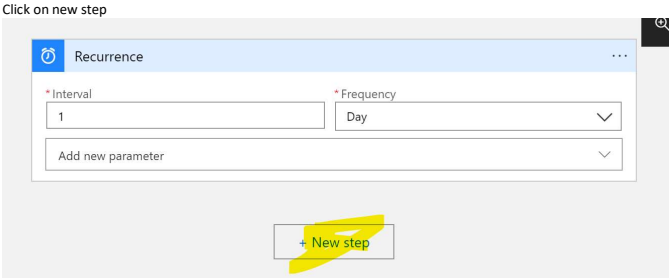
4. Click on Recurrence



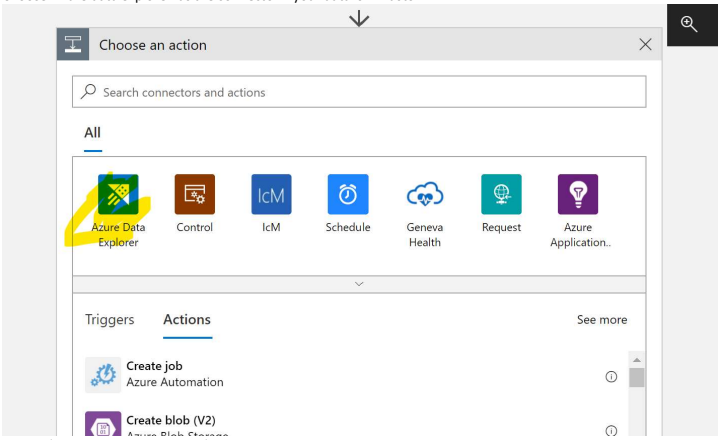
5. Fill in the interval and frequency at which you want it to run.



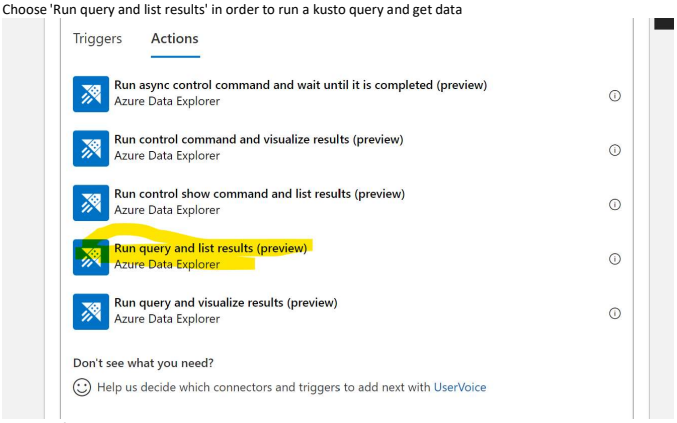
7. Click on new step



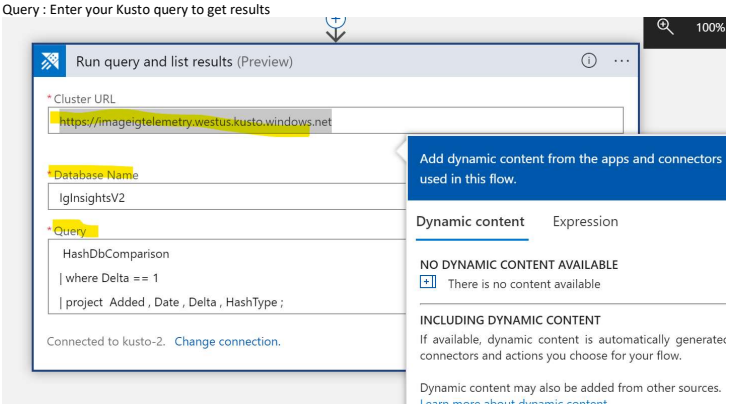
8. Choose 'Azure data explorer' as the connector if your data is in Kusto



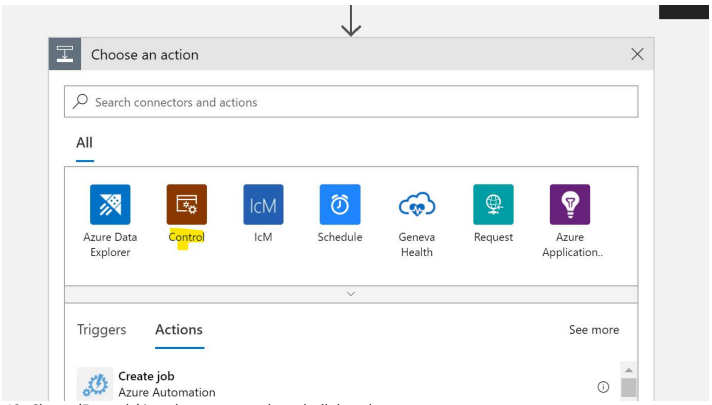
9. Choose 'Run query and list results' in order to run a kusto query and get data



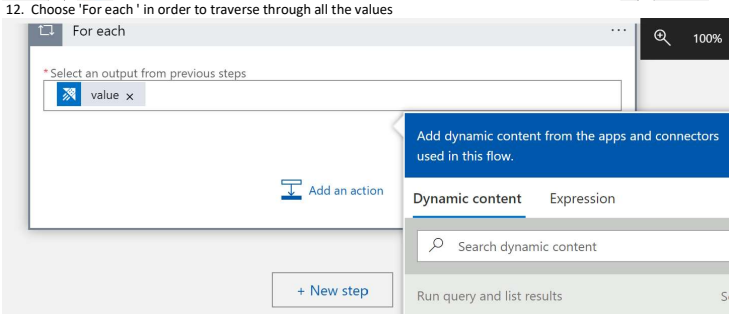
10. Enter the following values :
    Cluster values = https://imageigtelemetry.westus.kusto.windows.net
    Database : IgInsightsv2
    Query : Enter your Kusto query to get results



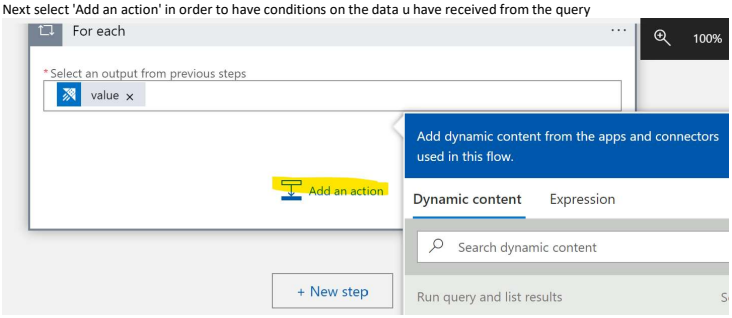
11. Choose your desired action :



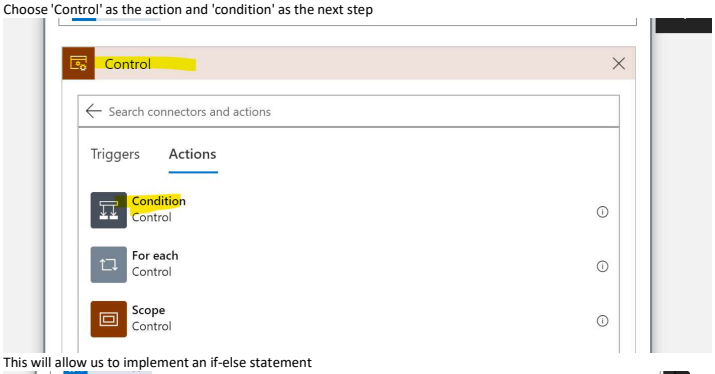
12. Choose 'For each ' in order to traverse through all the values



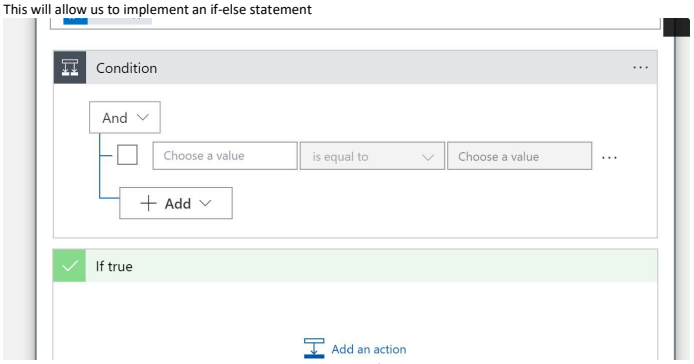
13. Next select 'Add an action' in order to have conditions on the data u have received from the query



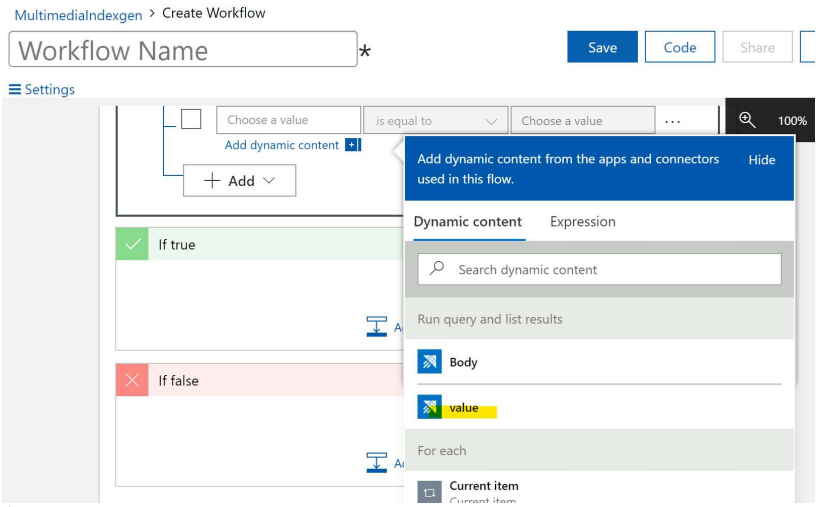
14. Choose 'Control' as the action and 'condition' as the next step



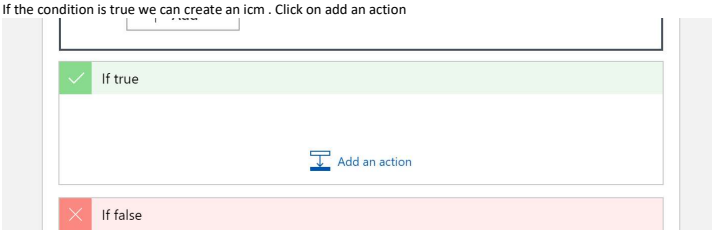
15. This will allow us to implement an if-else statement



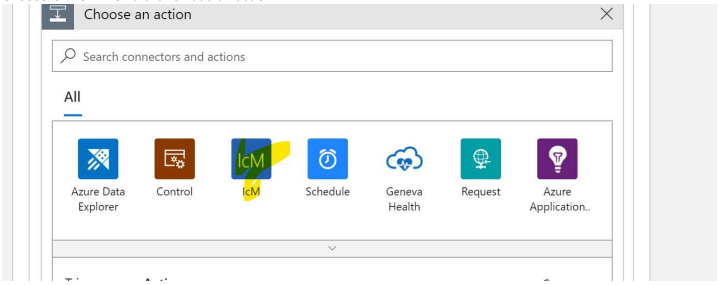
16. We have the ability to run loops on dynamic content received from the Kusto query



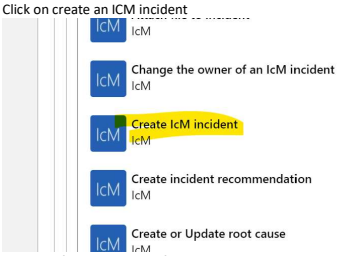
17. If the condition is true we can create an icm . Click on add an action



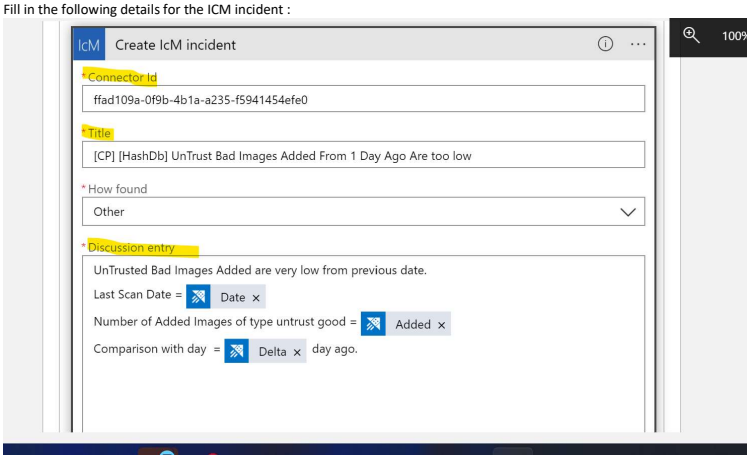
18. Choose icm for when u click on add an action

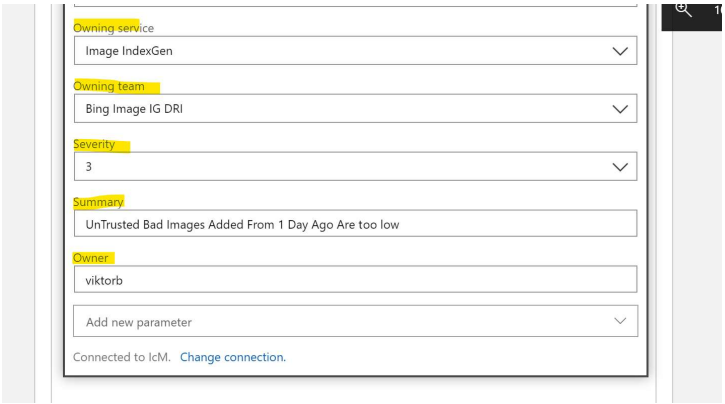


19. Click on create an ICM incident



20. Fill in the following details for the ICM incident :





21. Click on save
22. Enable the workflow and you can test it in order to see if It is successfully creating an incident.