# Azure data factory and its copy activity:-

Azure Data Factory is a cloud-based data integration service that allows you to create, schedule, and orchestrate data pipelines to move and transform data from various sources to different destinations. It provides a platform for building hybrid data integration solutions that connect data across cloud and on-premises environments.

One of the key components of Azure Data Factory is Copy Activity, which is used to move data between different data stores. Here's how you can execute and explain Copy Activity in Azure Data Factory:

**1.Create a Data Factory:** First, you need to create an Azure Data Factory instance in the Azure portal. This involves providing basic information like subscription, resource group, region, and name for your data factory.

**2.Create Linked Services:** Linked Services are connections to external data sources or destinations. You'll need to create linked services for the source and destination data stores you want to work with. For example, if you're copying data from an Azure SQL Database to Azure Blob Storage, you'll need to create linked services for both databases.

**3.Create Datasets:** Datasets represent the data structures within your data stores. You'll define datasets for the source and destination data, specifying the format, schema, and location of the data. This

helps Data Factory understand the structure of the data it's working with.

**4.Create Pipelines**: Pipelines are the workflows that define the data movement and transformation tasks. You'll create a new pipeline and add Copy Activity to it. Within the Copy Activity, you'll specify the source dataset, destination dataset, and any transformations or mappings required.

**5.Configure Copy Activity:** In the Copy Activity settings, you'll specify details like the source and destination linked services, the source and destination datasets, any data transformations or mappings, and options for copying data (e.g., incremental copy, parallel copy).

**6.Debug and Execute Pipeline**: Before deploying your pipeline to production, you can debug and test it within the Azure Data Factory interface. This allows you to verify that the data movement and transformations are working as expected. Once you're satisfied with the pipeline, you can deploy and schedule it to run automatically according to your desired frequency.

Now, let's explain some key concepts and features of Azure Data Factory Copy Activity:

- **Data Movement:** Copy Activity supports moving data between various data sources and destinations, including Azure Blob Storage, Azure SQL Database, Azure Data Lake Storage, on-premises databases, and more. It provides built-in connectors

for many common data sources and destinations, making it easy to integrate with different systems.

- **Data Transformation:** Copy Activity allows you to perform basic transformations on the data during the copy process, such as column mapping, data type conversion, and filtering. You can also use Azure Data Factory's data flow feature for more advanced data transformations and processing.

- **Performance and Scalability:** Copy Activity is designed for high performance and scalability, with features like parallel data transfer and automatic retry mechanisms to handle large volumes of data and ensure data integrity.

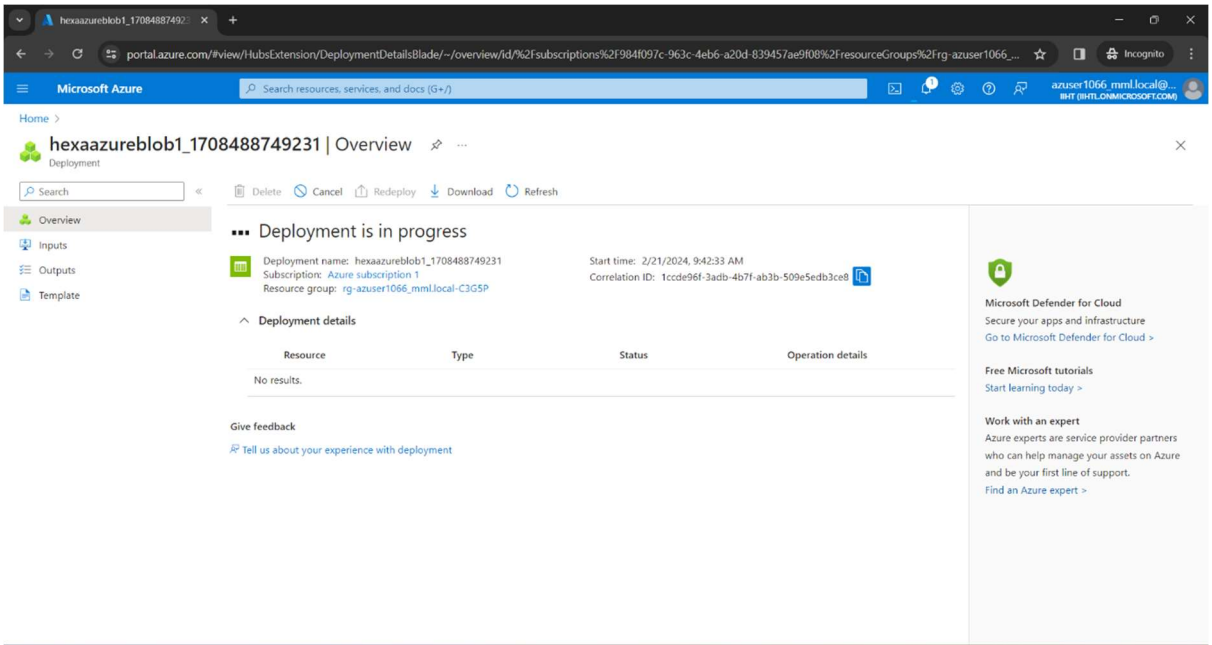
- **Monitoring and Logging**: Azure Data Factory provides monitoring and logging capabilities to track the execution of pipelines and activities, monitor data movement performance, and troubleshoot any issues that arise during the copy process.

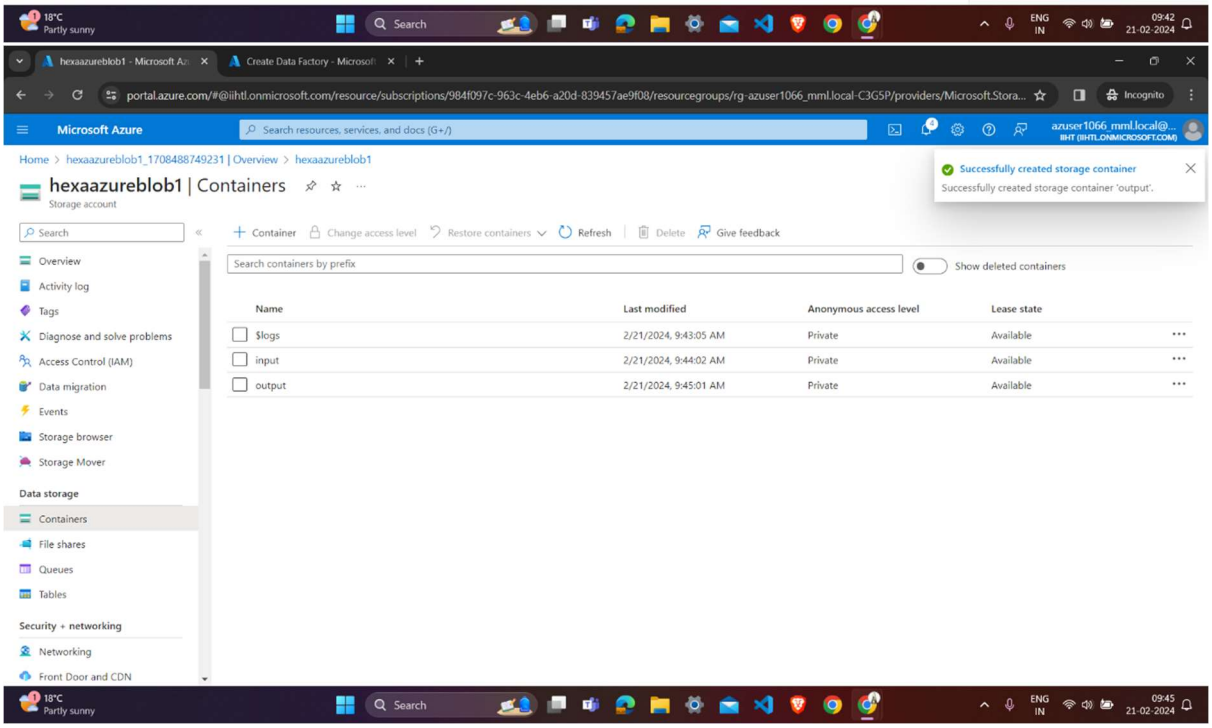
Overall, Copy Activity in Azure Data Factory is a powerful tool for building data integration and ETL (extract, transform, load) pipelines, allowing you to move and transform data efficiently between different data sources and destinations in the cloud and on-premises environments.

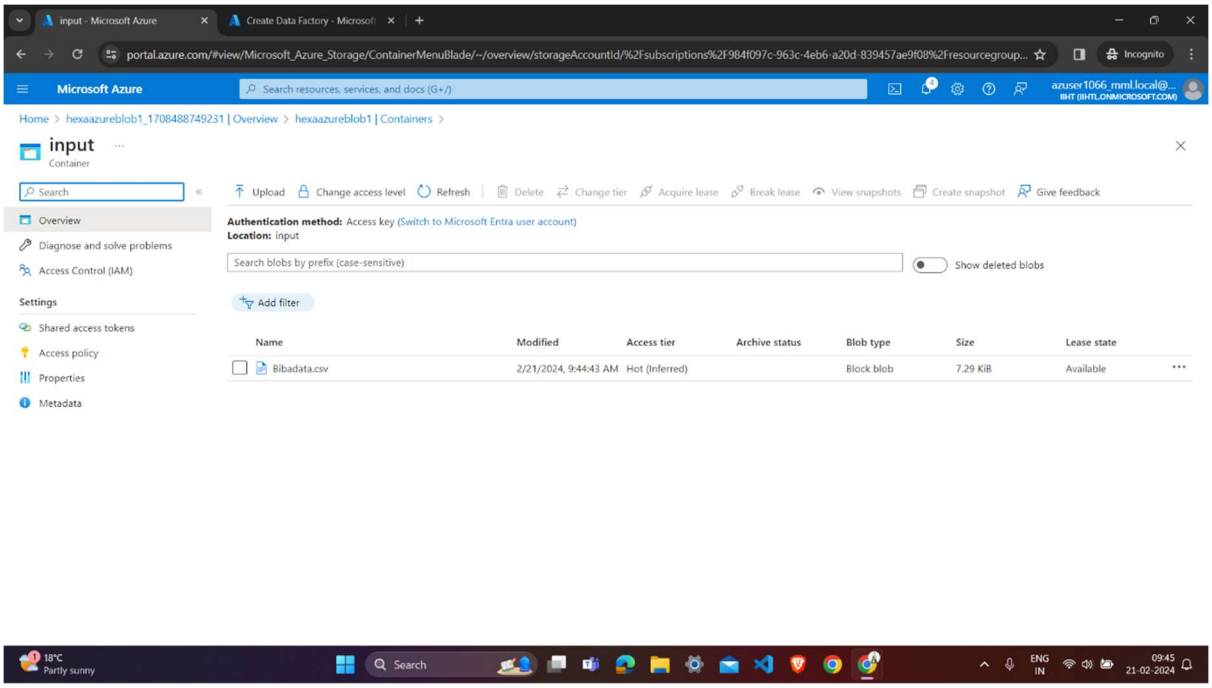
# Copy Activity:- Blob to Blob

## Create data storage account:-

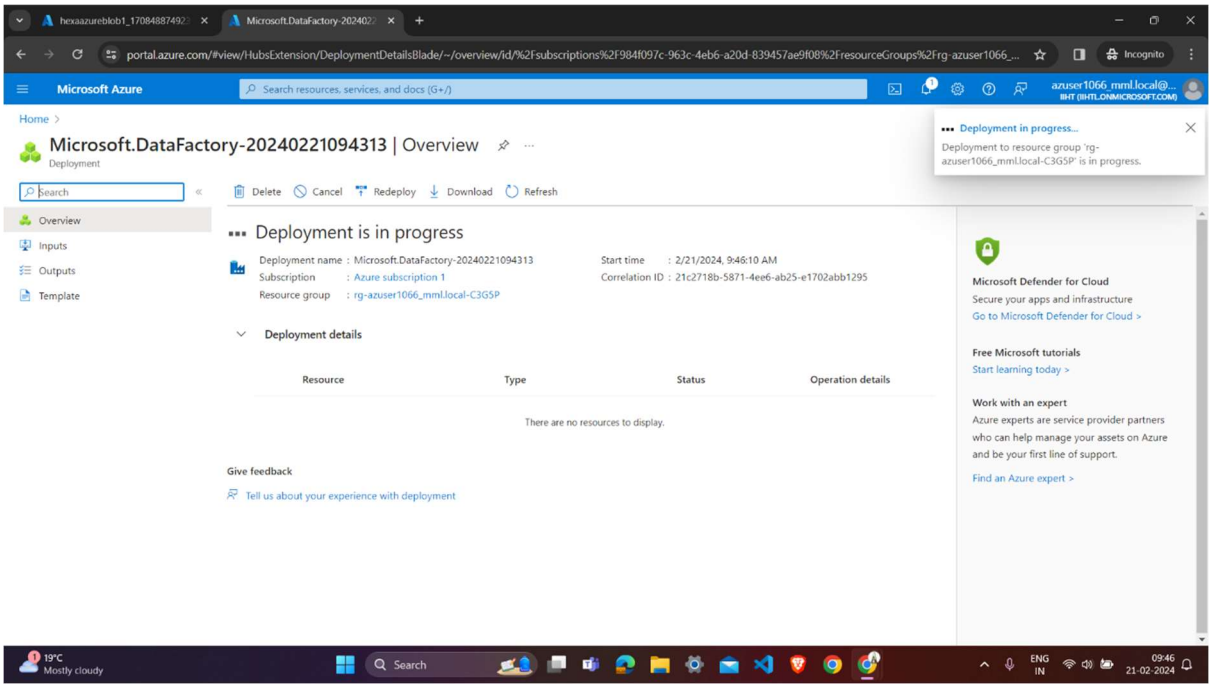
- Create a hexaazureblob1 account
- Create two container in it input and output
- Upload a csv file in the input container biba.csv.



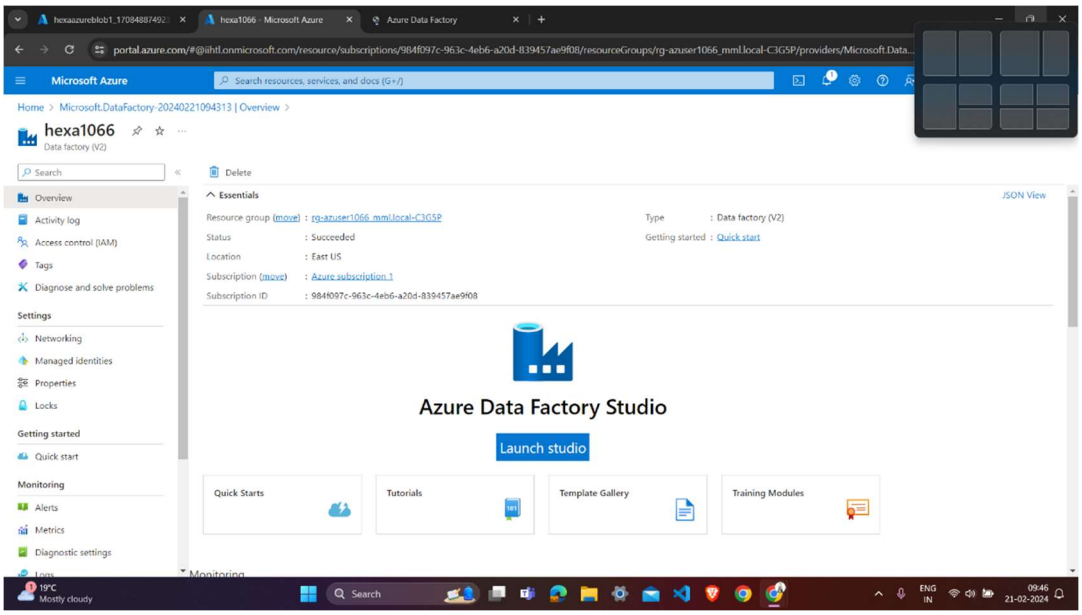




input - Microsoft Azure
Create Data Factory - Microsoft
portal.azure.com/#view/Microsoft_Azure_Storage/ContainerMenuBlade/~/overview/storageAccountId/%2Fsubscriptions%2F984f097c-963c-4eb6-a20d-839457ae9f08%2Fresourcegroup...
Incognito
Microsoft Azure
Search resources, services, and docs (G+/)
azuser1066_mml.local@...
IIHT (IIHTL.ONMICROSOFT.COM)
Home > hexaazureblob1_1708488749231 | Overview > hexaazureblob1 | Containers >
input
Container
Search
Overview
Diagnose and solve problems
Access Control (IAM)
Settings
Shared access tokens
Access policy
Properties
Metadata
Upload
Change access level
Refresh
Delete
Change tier
Acquire lease
Break lease
View snapshots
Create snapshot
Give feedback
Authentication method: Access key (Switch to Microsoft Entra user account)
Location: input
Search blobs by prefix (case-sensitive)
Show deleted blobs
Add filter
Name
Modified
Access tier
Archive status
Blob type
Size
Lease state
Bibadata.csv
2/21/2024, 9:44:43 AM
Hot (Inferred)
Block blob
7.29 KiB
Available
18°C
Partly sunny
Search
ENG
IN
09:45
21-02-2024

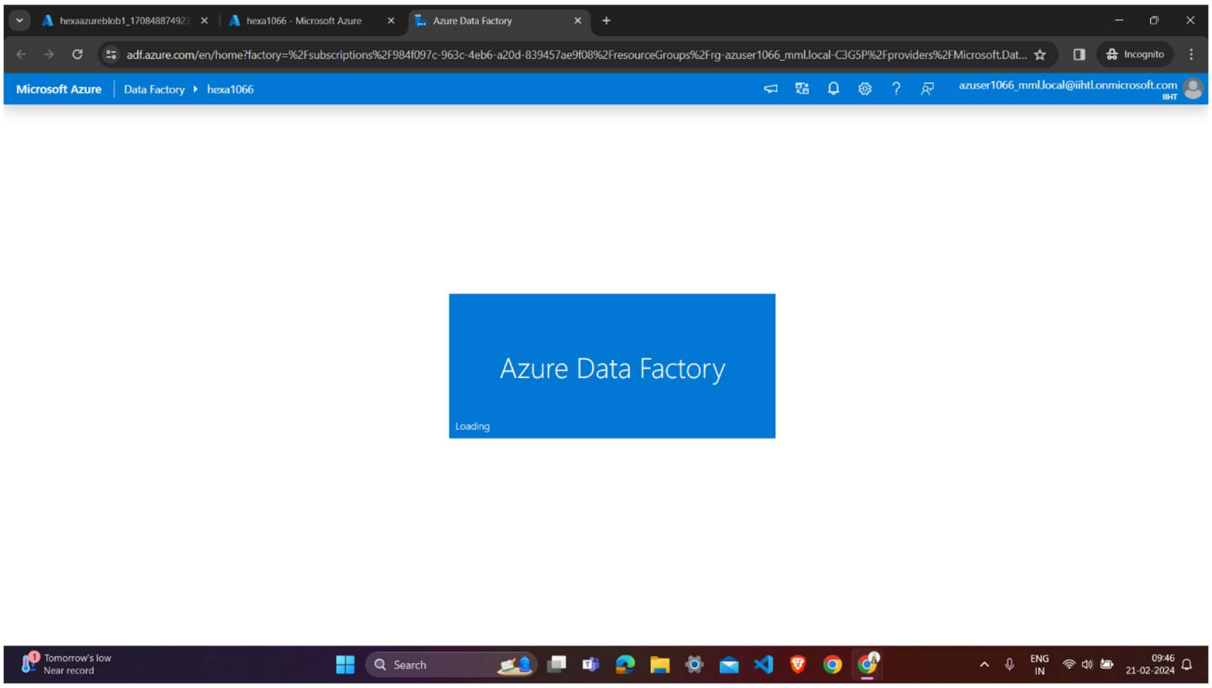
## Create a data factory name hexa1066:-



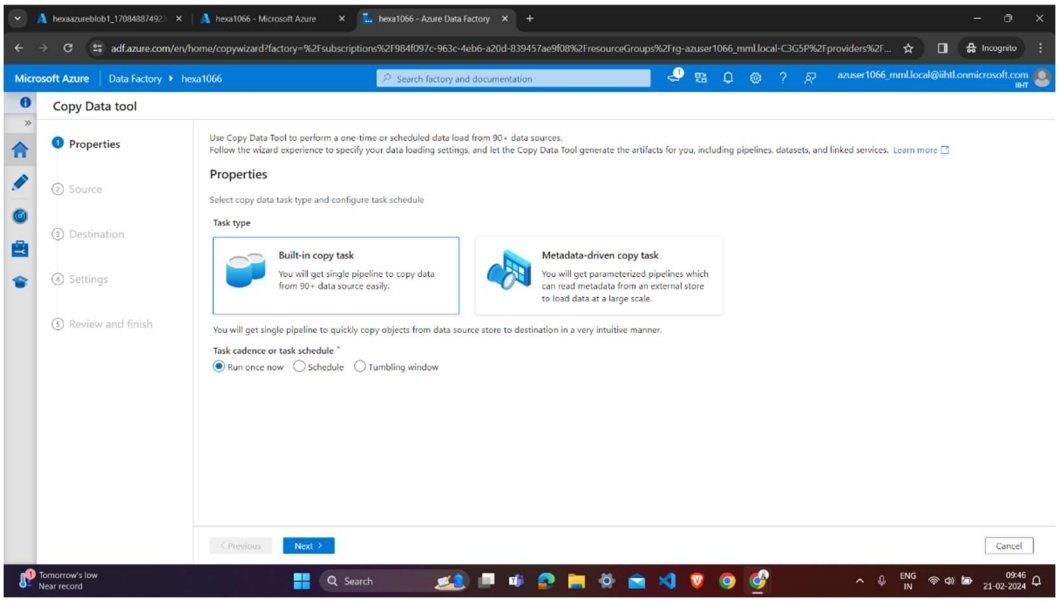

## Launch Azure Data factory studio:-



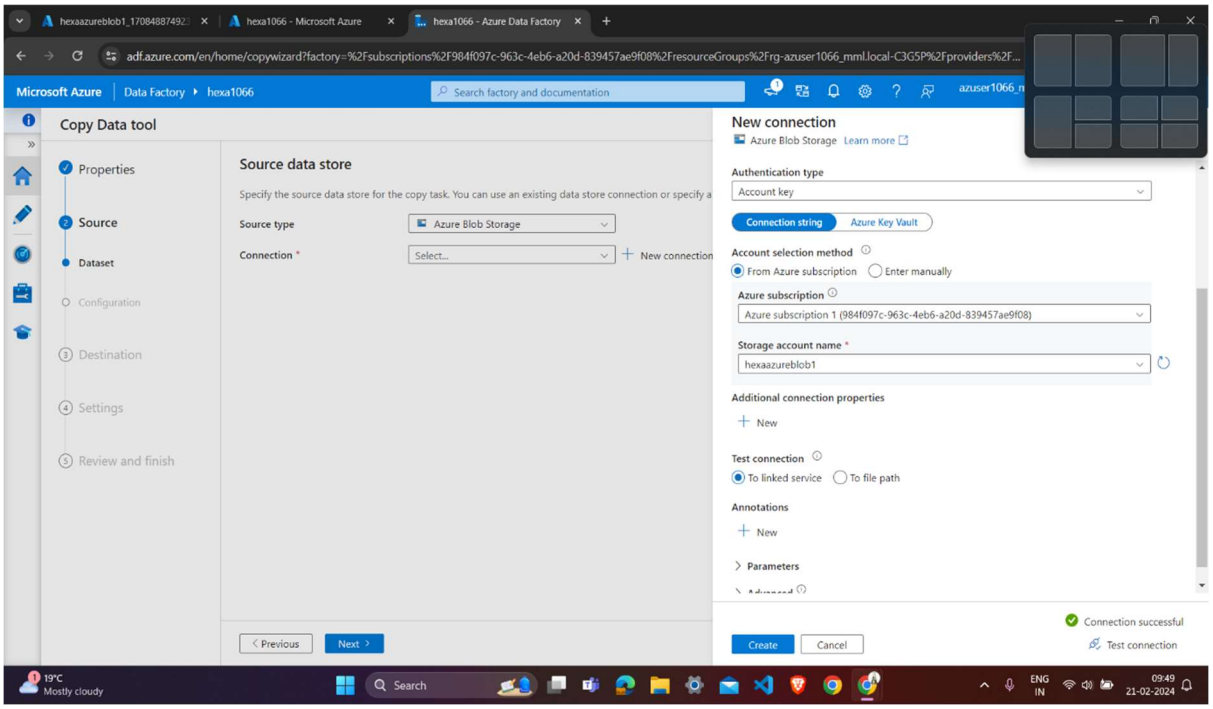
# Azure Data factory launching:-



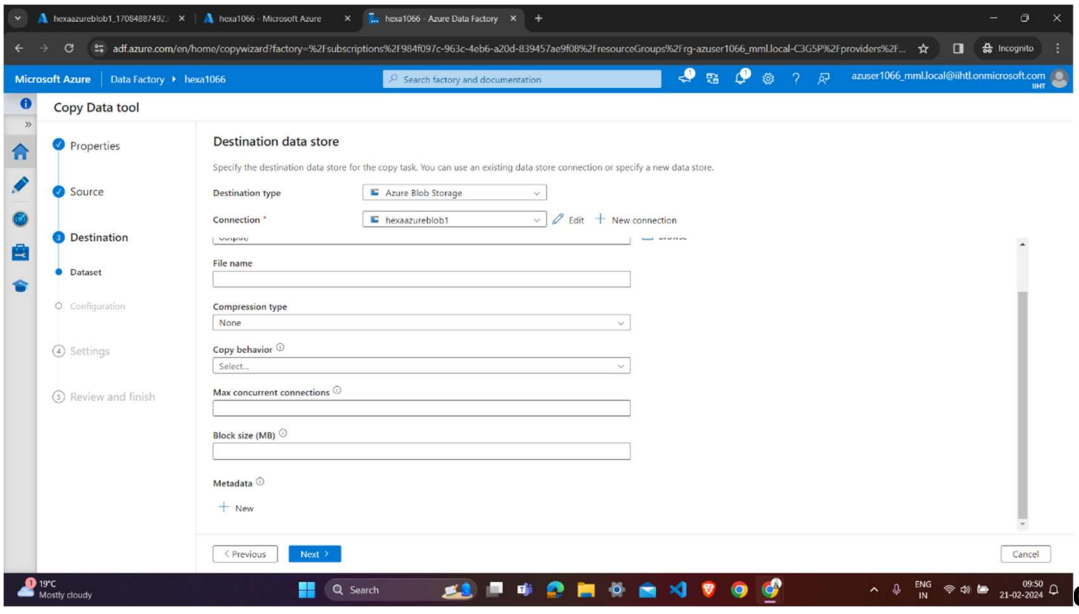

# Create built-in copy task:-



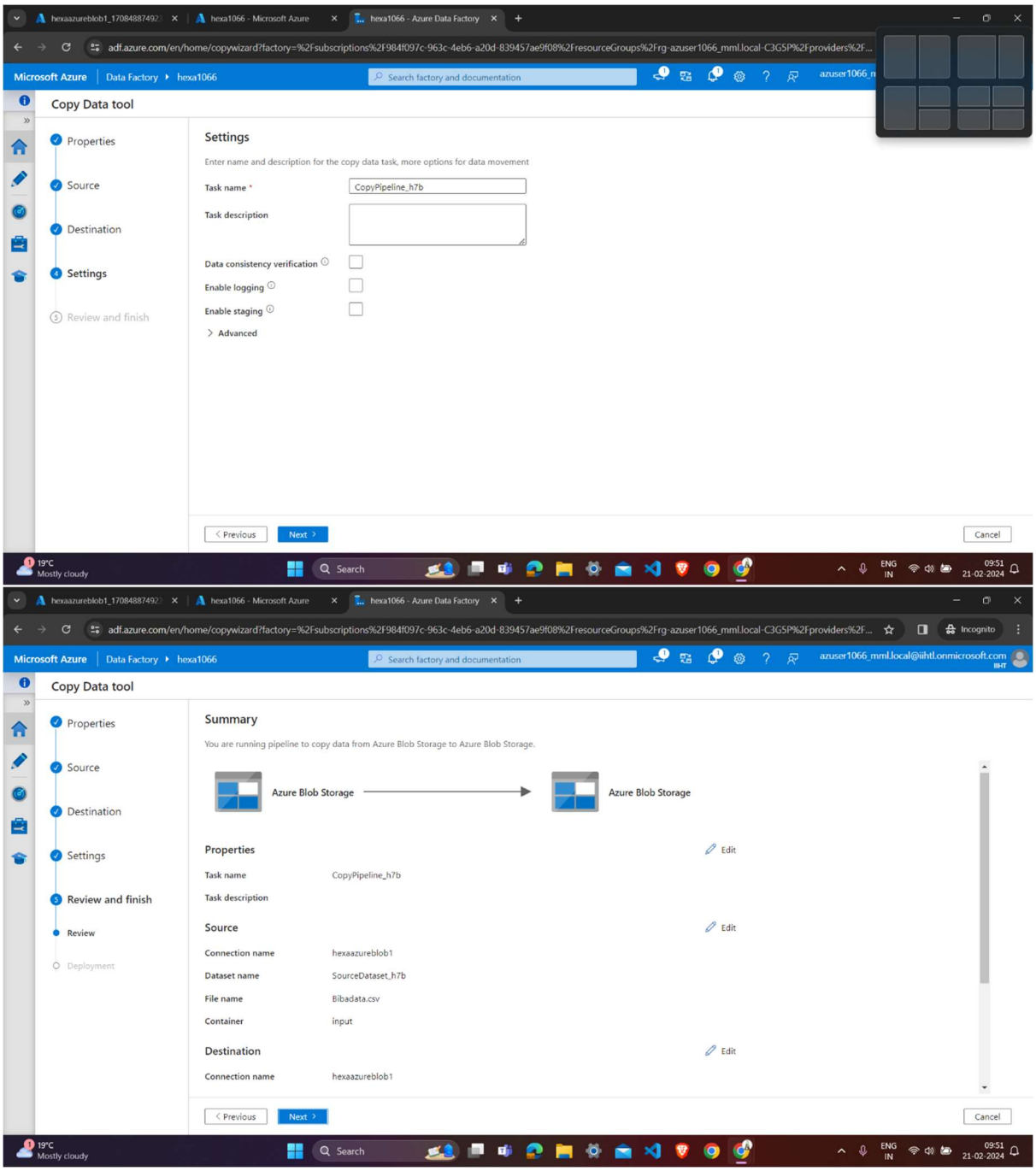
## Enter source type (azure blob storage) and create new connection:-




## Enter the source and destination detail :-




on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hexa1066 - Microsoft Azure
hexa1066 - Azure Data Factory
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Microsoft Azure
Data Factory
hexa1066
Search factory and documentation
azuser1066_m
Copy Data tool
Properties
Source
Destination
Settings
Review and finish
Settings
Enter name and description for the copy data task, more options for data movement
Task name *
CopyPipeline_h7b
Task description
Data consistency verification
Enable logging
Enable staging
Advanced
Previous
Next
Cancel
19°C
Mostly cloudy
Search
ENG
IN
09:51
21-02-2024
hexaazureblob1_1708488749
hexa1066 - Microsoft Azure
hexa1066 - Azure Data Factory
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Incognito
Microsoft Azure
Data Factory
hexa1066
Search factory and documentation
azuser1066_mml.local@iihtl.onmicrosoft.com
IIHT
Copy Data tool
Properties
Source
Destination
Settings
Review and finish
Review
Deployment
Summary
You are running pipeline to copy data from Azure Blob Storage to Azure Blob Storage.
Azure Blob Storage
Azure Blob Storage
Properties
Edit
Task name
CopyPipeline_h7b
Task description
Source
Edit
Connection name
hexaazureblob1
Dataset name
SourceDataset_h7b
File name
Bibadata.csv
Container
input
Destination
Edit
Connection name
hexaazureblob1
Previous
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ENG
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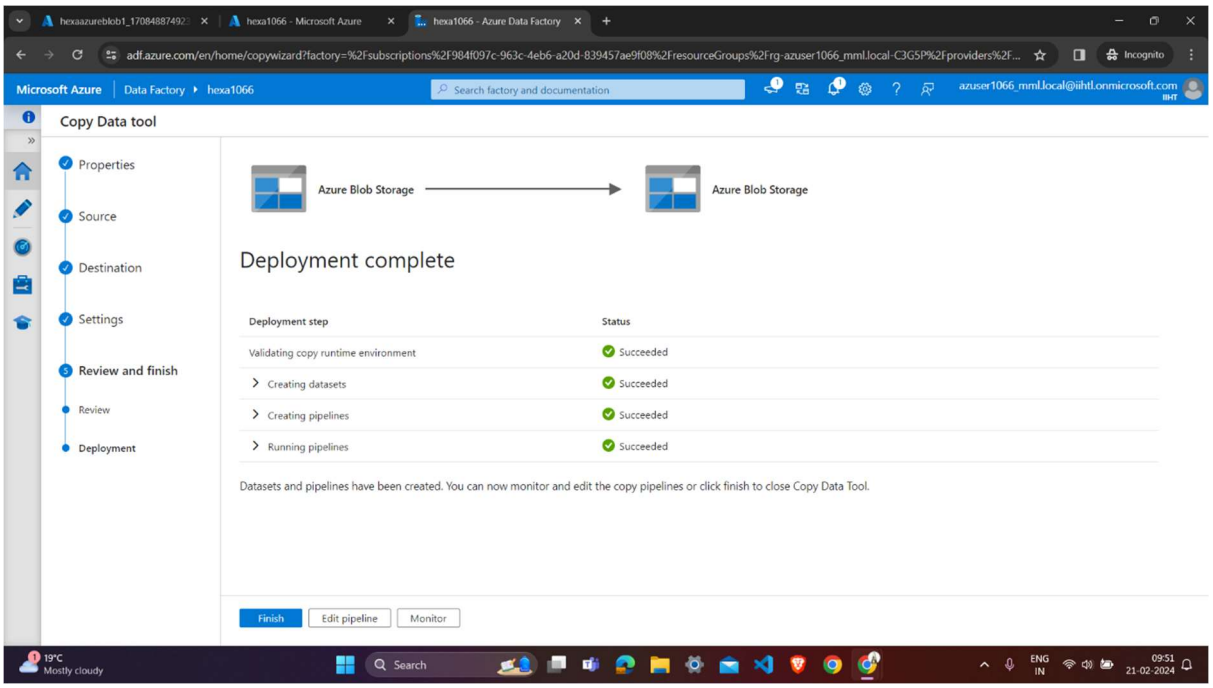
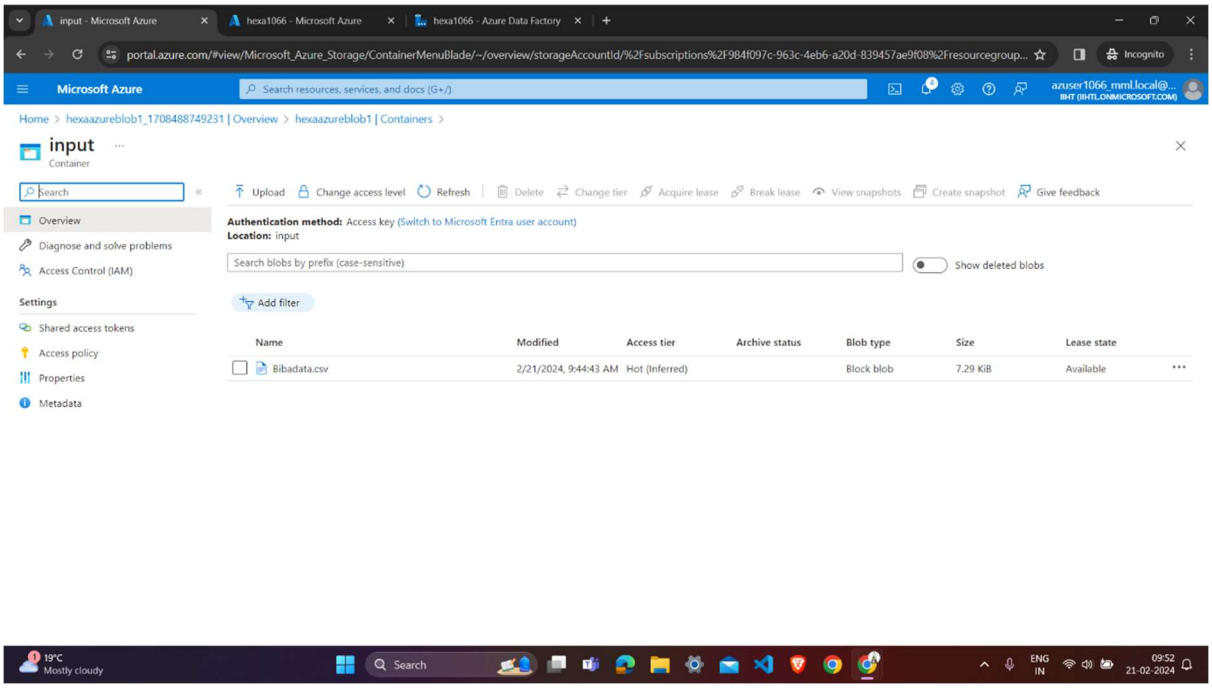
21-02-2024

# Finish Deployment:-



## Input file we upload biba.csv:-




## Output container have copy of input biba.csv file:-