

Lab-03 Azure Cosmos Database

Instance ID:6816444 [DP-900T00-A-CEP-M03] Explore non-relational data in Azure (Lab03 and 04) Select Language: English

5% Completed Lab Time Left: 01:56:52

Lab Actions

2. In the Azure Cosmos DB for NoSQL tile, select Create.

3. Enter the following details, and then select Review + Create:

- Subscription: If you're using a sandbox, select

On VM: DP-900-VM Page: 3/12

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Learning Objectives achieved

- Created Azure Cosmos Database account for NoSQL and configured for deployment
- Deployed Azure CosmosDB
- Added new container and items using data explorer
- Sample Database and Sample Container configured on CosmosDB
- Modified JSON query on Azure Cosmos DB environment
- Created and deployed Azure Synapse Analytics
- Configured Azure Synapse Analytics studio

Configuring Azure Cosmos DB account

Instance ID:6816444 [DP-900T00-A-CEP-M03] Explore non-relational data in Azure (Lab03 and 04) Select Language: English

7% Completed Lab Time Left: 01:55:46

Lab Actions

and select Create.

- 2. In the Azure Cosmos DB for NoSQL tile, select Create.
- 3. Enter the following details, and then select Review + Create:
 - Subscription: If you're using a sandbox, select

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Azure CosmosDB deployment

labs.xtremelabs.io/LabViewerConnection/ShowLab?labInstanceGuid=8b9ea703-c54b-4df6-ac7c-04bff6afc4a7&fullScreen=False&curr...

Instance ID:6816390 [DP-900T00-A-CEP-M03] Explore non-relational data in Azure (Lab03 and 04) Select Language: English

8% Completed Lab Time Left: 01:51:01

Lab Actions

- Apply Free-Tier Discount: Select Apply if available
- Limit total account throughput: Unselected

☒ 4. When the configuration has been validated, select Create.

☐ 5. Wait for deployment to complete. Then go to the deployed resource.

On VM: DP-900-VM Page: 3/12

Microsoft Azure

Search resources, services, and docs (G+)

Copilot

Home >

Microsoft.Azure.CosmosDB-20250128073109 | Overview

Deployment

Delete Cancel Redeploy Download Refresh

Deployment is in progress

Deployment name : Microsoft.Azure.Cosm... Start time : 1/28/2025, 7:31:12 AM

Subscription : XLabs-129 Correlation ID : e47573d8-94b9-4082...

Resource group : ray88

Deployment details

Microsoft Defender for Cloud

Secure your apps and infrastructure

Go to Microsoft Defender for Cloud >

Free Microsoft tutorials

Classroom Chat

Azure CosmosDB deployed

labs.xtremelabs.io/LabViewerConnection/ShowLab?labInstanceGuid=8b9ea703-c54b-4df6-ac7c-04bff6afc4a7&fullScreen=False&curr...

Instance ID:6816390 [DP-900T00-A-CEP-M03] Explore non-relational data in Azure (Lab03 and 04) Select Language: English

8% Completed Lab Time Left: 01:48:23

Lab Actions

DB and select **Create**.

- 2. In the **Azure Cosmos DB for NoSQL** tile, select **Create**.
- 3. Enter the following details, and then select **Review + Create**:
 - Subscription: If you're using a sandbox, select *Concierge Subscription*. Otherwise, select your Azure subscription.
 - Resource group:

On VM: DP-900-VM Page: 3/12

Microsoft Azure Search resources, services, and docs (G+/) Copilot

Home > Microsoft.Azure.CosmosDB-20250128073109 | Overview

Deployment

Delete Cancel Redeploy Download Refresh

✓ Your deployment is complete

Deployment name : Microsoft.Azure.Cosm... Start time : 1/28/2025, 7:31:12 AM
Subscription : XLabs-129 Correlation ID : e47573d8-94b9-4082...
Resource group : ray88

> Deployment details

Cost management
Get notified to stay within your budget and prevent unexpected charges on your bill.
[Set up cost alerts >](#)

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New Container in Azure CosmosDB

labs.xtremelabs.io/LabViewerConnection/ShowLab?labInstanceGuid=8b9ea703-c54b-4df6-ac7c-04bff6afc4a7&fullScreen=False&curr...

Instance ID:6816390 [DP-900T00-A-CEP-M03] Explore non-relational data in Azure (Lab03 and 04) Select Language: English

11% Completed Lab Time Left: 01:47:11

Lab Actions

- ☒ 1. On the page for your new Cosmos DB account, in the pane on the left, select **Data Explorer**.
- ☐ 2. In the **Data Explorer** page, select **Launch quick start**.
- ☐ 3. In the **New container** tab, review the pre-populated settings for the sample database, and then select **OK**.

On VM: DP-900-VM Page: 4/12

ray88varghese - Microsoft Azure

https://portal.azure.com/?azure-portal=true#@xtremelabs.onmicroso...

Microsoft Azure Search resources, services, and docs (G+/)

Home > Microsoft.Azure.CosmosDB-20250128073109 | Overview > ray88varghese

ray88varghese | Data Explorer Azure Cosmos DB account

Enable Azure Synapse Link

+ New Container

Home

Launch quick start Launch a quick start

New Container Create a new container for storage and

Connect Prefer using your own choice of tooling? Find the connection string you need to

Classroom Chat

Modify JSON on Items in container- Data Explorer CosmosDB

The screenshot displays the XtremeLabs interface with a lab task on the left and the Azure Data Explorer on the right.

Lab Task (Left Panel):

- Instance ID: 6816444 [DP-900T00-A-CEP-M03] Explore non-relational data in Azure (Lab03 and 04)
- 21% Completed Lab Time Left: 01:44:26
- Lab Actions: 4. Modify the JSON for the new item as follows, and then select **Save**.
- JSON Template:

```
{  "name": "Road Helmet, 45",  "id": "123456789",  "category": "Road Helmet",  "price": 45.99}
```

Azure Data Explorer (Right Panel):

- Account: ray88varghese | Data Explorer (Azure Cosmos DB account)
- Navigation: Home > Resource groups > ray > ray88varghese
- Actions: New Item, Update, Discard, Delete, Upload Item
- Query: `SELECT * FROM c` (Type a query predicate (e.g., WHERE c.id='1'), or choose one from the drop)
- Table View:

id	price	description
6	48.74	"The product called \"Road Helmet, 45\"
7	48.74	"The product called \"Road Helmet, 45\"
8	48.74	"The product called \"Road Helmet, 45\"
9	48.74	"The product called \"Road Helmet, 45\"

Footer:

- On VM: DP-900-VM Page: 5/12
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Modify database query- Query JSON on Azure CosmosDB

The screenshot displays a web-based lab interface for Azure Cosmos DB. The top navigation bar shows the instance ID 6816444 and the lab title "Explore non-relational data in Azure (Lab03 and 04)". The left sidebar indicates that 26% of the lab is completed and shows a list of lab actions. The main content area is the "ray88varghese | Data Explorer" interface. It shows a query being modified in the "Items" container. The query is:

```
SELECT *
FROM c
WHERE CONTAINS
(c.name, "Helmet")
```

The query is being executed, and the results are displayed in a table with columns: Home, Items.Items, Sampl...Items, and Sampl...Scale ... The results table shows 4 rows of data. The bottom of the interface includes a footer with "Support", "Privacy & Cookies", and "© 2025 XtremeLabs LLC". The bottom right corner shows the time 8:24 AM on 1/28/2025 and the XtremeLabs logo.

SampleDatabase and Sample Container- CosmosDB

The screenshot displays a web application interface for Azure Cosmos DB, titled "Instance ID:6816444 [DP-900T00-A-CEP-M03] Explore non-relational data in Azure (Lab03 and 04)". The interface is divided into several sections:

- Top Bar:** Includes a "Select Language: English" dropdown and a signal strength indicator.
- Lab Status:** Shows "15% Completed" and "Lab Time Left: 01:47:33".
- Task List:** A list of tasks, with the fourth task highlighted: "4. Observe the status in the panel at the bottom of the screen until the **SampleDB** database and its **SampleContainer** container has been created (which may take a minute or so)." A blue checkmark indicates completion.
- Lab Actions:** A dropdown menu labeled "Lab Actions".
- On VM:** Displays "DP-900-VM" and "Page: 4/12".
- Support and Privacy:** Links for "Support" and "Privacy & Cookies", and a copyright notice "© 2025 XtremeLabs LLC".
- Azure Portal:** A secondary window showing the "ray88varghese" Azure Cosmos DB account. It includes a search bar, a "New SQL Query" button, and a query editor with the text "SELECT * FROM c".
- Database Explorer:** A sidebar showing the database structure, including "SampleDatabase" and "SampleContainer".
- Footer:** A banner stating "This training session brought to you by Southern Alberta Institute of Technology (XTP) Powered by XTREMELABS".

Create Azure Synapse Analytics

Instance ID:6816444 [DP-900T00-A-CEP-M03] Explore non-relational data in Azure (Lab03 and 04)

Select Language: English

35% Completed Lab Time Left: 01:25:37

Lab Actions

4. When you've entered these details, select **Review + create**, and then select **Create** to create the workspace.

5. Wait for the workspace to be created - this may take five minutes or so.

6. When deployment is complete, go to the resource group that was created

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Create Synapse workspace - Microsoft Azure

https://portal.azure.com/#create/Microsoft.Synapse

Microsoft Azure Search resources, services, and docs (G+)

Copilot

Home > Create a resource > Marketplace >

Create Synapse workspace

Validation succeeded

Basics Security Networking Tags Review + create

Product Details

Azure Synapse Analytics workspace Serverless SQL est. cost/TB

Windows Taskbar

9:40 AM 2025-01-28

Windows Taskbar

9:40 AM 2025-01-28

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XTREME LABS

Deployment Azure Synapse Analytics

Instance ID:6816444 [DP-900T00-A-CEP-M03] Explore non-relational data in Azure (Lab03 and 04) Select Language: English

40% Completed Lab Time Left: 01:21:44

Lab Actions

- 4. When you've entered these details, select **Review + create**, and then select **Create** to create the workspace.
- 5. Wait for the workspace to be create - this may take five minutes or so.
- 6. When deployment is complete, go to

On VM: DP-900-VM Page: 8/12

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Instance ID:6816444 [DP-900T00-A-CEP-M03] Explore non-relational data in Azure (Lab03 and 04)

40% Completed Lab Time Left: 01:20:36

Lab Actions

Synapse Studio card, select Open to open Synapse Studio in a new browser tab. Synapse Studio is a web based interface that you can use to work with your Synapse Analytics workspace.

8. On the left side of Synapse Studio, the » icon to expand the menu - this reveals the different pages within Synapse Studio that you'll use to

On VM: DP-900-VM Page: 8/12

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Microsoft.Azure.SynapseAnalytics

https://portal.azure.com/#view/HubsExtension/DeploymentDet...

Microsoft Azure Search resources, services, and docs (G+)

Copilot

Home > Microsoft.Azure.SynapseAnalytics-20250128083632 | Overview

Deployment

Delete Cancel Redeploy Download Refresh

✓ Your deployment is complete

Deployment name : Microsoft.Azure.SynapseAnalytics-20250128083632

Subscription : XLabs-461

Resource group : synapse-rg

Start time : 1/28/2025, 8:41:03 AM

Correlation ID : d43d7994-adc8-488a-9758-ef4ba1a5af5b

Classroom Chat

8:45 AM 1/28/2025

9:45 AM 2025-01-28

Instance ID:6816444 [DP-900T00-A-CEP-M03] Explore non-relational data in Azure (Lab03 and 04)

Select Language: English

40% Completed Lab Time Left: 01:19:24

Lab Actions

Data Lake Storage account.

7. Select your Synapse workspace, and in its Overview page, in Open Synapse Studio card, select Open to open Synapse Studio in a new browser tab. Synapse Studio is a web based interface that you can use to work with your Synapse Analytics workspace.

On VM: DP-900-VM

Page: 8/12

Support

Privacy & Cookies

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synapse-ws-ray - Microsoft Azure

https://portal.azure.com/#@xtremelabs.onmicrosoft.com/reso...

Microsoft Azure Search resources, services, and docs (G+)

Home > Microsoft.Azure.SynapseAnalytics-20250128083632 | Overview > synapse-ws-ray

synapse-ws-ray Synapse workspace

+ New dedicated SQL pool + New Apache Spark pool + New Data Explorer pool (preview) Refresh

Essentials

Resource group (move) synapse-rg	Networking Show firewall settings
Status Succeeded	Primary ADLS Gen2 account URL https://datalakeray.dfs.core.windows.net
Location North Europe	Primary ADLS Gen2 file system fsray

JSON View

Email: XLab-10g-461@xtremelabs.us
Directory: Lab Directory (cb561bac-8eae-4e86-979a-765c514af3)
Domain: xtremelabs.onmicrosoft.com

Classroom Chat

Azure Synapse Analytics Studio

Instance ID:6816444 [DP-900T00-A-CEP-M03] Explore non-relational data in Azure (Lab03 and 04) Select Language: English

40% Completed Lab Time Left: 01:17:04

Lab Actions

Synapse Studio card, select Open to open Synapse Studio in a new browser tab. Synapse Studio is a web based interface that you can use to work with your Synapse Analytics workspace.

8. On the left side of Synapse Studio, the >> icon to expand the menu - this reveals the different pages within Synapse Studio that you'll use to

On VM: DP-900-VM Page: 8/12

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Azure Synapse Analytics Loading

Classroom Chat

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Pipeline Data tool -Azure synapse analytics studio

Microsoft Azure | Synapse Analytics | synapse-ws-ray

XLab-1Og-461@xtremelabs.us
LAB DIRECTORY

Copy Data tool

- ✓ Properties
- ✓ Source
- ✓ Destination
- ✓ Settings
- 5 Review and finish**
- Review
- Deployment

HTTP → Azure Data Lake Storage Gen2

Deployment complete

Deployment step	Status
Validating copy runtime environment	✓ Succeeded
> Creating datasets	✓ Succeeded
> Creating pipelines	✓ Succeeded
> Running pipelines	✓ Succeeded

Datasets and pipelines have been created. You can now monitor and edit the copy pipelines or click finish to close Copy Data Tool.

Microsoft Azure

Synapse Analytics

synapse-ws-ray

Search

1

Favorites (Ctrl+Shift+O)

XLab-1Og-461@xtremelabs.us

LAB DIRECTORY

Home

Data

Develop

Integrate

Monitor

Manage

Synapse live

Validate all

Publish all

Data

Workspace

Linked

Filter resources by name

Azure Data Lake Storage Gen2

2

synapse-ws-ray (Primary - datalake...

frray (Primary)

(Attached Containers)

Integration datasets

2

frray

Other users in your workspace may have access to modify this item. Do not use this item unless you trust all users who may have access to the workspace.

New SQL script

New notebook

New data flow

More

←

→

⌵

⬆

frray

Name	Last Modified	Content Type	Size
products.csv	2025-01-28, 10:13:24 a.m.		14.3 KB

Showing 1 to 1 of 1 cached items

Microsoft Azure

Synapse Analytics

synapse-ws-ray

Validate all resources and publish them

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LAB DIRECTORY

Home

Data

Develop

Integrate

Monitor

Manage

Synapse live

Validate all

Publish all 1

Data

Workspace

Linked

Filter resources by name

Azure Data Lake Storage Gen2 2

synapse-ws-ray (Primary - datalake...

frray (Primary)

(Attached Containers)

Integration datasets 2

DestinationDataset_o2k

SourceDataset_o2k

frray

SQL script 1

Run

Undo

Publish

Query plan

1 -- This is auto-generated code

2 SELECT

3 TOP 100 *

4 FROM

5 OPENROWSET(

6 BULK 'https://datalakeray.dfs.com

7 FORMAT = 'CSV',

8 PARSE_VERSION = '2.0'

9) AS [result]

10

Results

Messages

View

Table

Chart

Search

C2	C3	C4
Road-250 Red, ...	Road Bikes	24
Road-250 Red, ...	Road Bikes	24

00:00:01 Query executed successfully.

Properties

General

Related (0)

Name *

SQL script 1

Description

Type

.sql script

Size

224 bytes

Results settings per query

☒ First 5000 rows (default)

☐ All rows

https://labs.xtremelabs.io/LabMenu/?track=DP-900T00-A-CEP

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Ray Varghese **RV**

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DP-900T00-A-CEP

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Access Codes

History

Support

FAQs

Lab Title: [DP-900T00-A-CEP-M03] Explore non-relational data in Azure (Lab02)

Duration: 120 minutes

Status: **Completed and Relaunch**

Take Lab

Lab Title: [DP-900T00-A-CEP-M03] Explore non-relational data in Azure (Lab03 and 04)

Duration: 120 minutes

Status: **In Progress (69% Completed)**

Take Lab

Lab Title: [DP-900T00-A-CEP-M04] Explore data analytics in Azure (Lab06)

Duration: 120 minutes

Status: Not Initiated

Classroom Chat