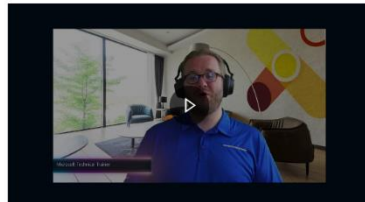




Microsoft Azure Data Fundamentals: Explore data analytics in Azure

3 hr 31 min • Learning Path • 3 Modules

BeginnerData AnalystData EngineerDatabase AdministratorSolution ArchitectStudentAzure



3100 XP



Explore fundamentals of large-scale analytics

1 hr 32 min • Module • 10 Units

★★★★★ 4.8 (10,415)

1100 XP

Organizations use analytics platforms to build large scale data analytics solutions that generate insights and drive success. Microsoft provides multiple technologies that you can combine to build a large scale data analytics solution.

Overview ^

Introduction

1 min



Describe data warehousing architecture

3 min



Explore data ingestion pipelines

5 min



Explore analytical data stores

8 min



Explore platform-as-a-service (PaaS) solutions

8 min



Exercise: Explore data analytics in Azure with Azure Synapse Analytics

30 min



Explore Microsoft Fabric

8 min



Exercise: Explore Microsoft Fabric

25 min



Knowledge check

3 min





Explore fundamentals of real-time analytics

✓ 1200 XP

1 hr 21 min • Module • 11 Units

★★★★★ 4.7 (5,835)

Learn about the basics of stream processing, and the services in Microsoft Azure that you can use to implement real-time analytics solutions.

Overview ^

Introduction

1 min



Understand batch and stream processing

9 min



Explore common elements of stream processing architecture

4 min



Explore Azure Stream Analytics

2 min



Exercise: Explore Azure Stream Analytics

15 min



Explore Apache Spark on Microsoft Azure

3 min



Exercise: Explore Spark Streaming in Azure Synapse Analytics

15 min



Explore Realtime Analytics in Microsoft Fabric

3 min



Exercise: Explore Realtime Analytics in Microsoft Fabric

25 min



Knowledge check





Explore fundamentals of data visualization

✓ 800 XP

38 min • Module • 7 Units

★★★★★ 4.8 (9,809)

Learn the fundamental principles of analytical data modeling and data visualization, using Microsoft Power BI as a platform to explore these principles in action.

Overview ^

Introduction

1 min



Describe Power BI tools and workflow

3 min



Describe core concepts of data modeling

5 min



Describe considerations for data visualization

5 min



Exercise – Explore fundamentals of data visualization with Power BI

20 min



Knowledge check

3 min



Summary

1 min



Data analysis with Kusto Query Language

✓ 4400 XP

2 hr 34 min • Learning Path • 4 Modules

Beginner Intermediate Advanced Business Analyst Data Analyst Data Scientist Developer Security Operations Analyst
Data Engineer Technology Manager Azure Data Explorer Azure Monitor Microsoft Sentinel Azure Log Analytics
Azure Resource Graph Microsoft Defender Microsoft Configuration Manager Microsoft Fabric Azure

In this learning path, students learn how to analyze data in various environments using the Kusto Query Language.

Prerequisites

The following prerequisite should be completed:

- Familiarity with database structures like tables, columns, and rows

Added



Explore the fundamentals of data analysis using Kusto Query Language (KQL)

✓ 1000 XP

34 min • Module • 9 Units

★★★★★ 4.8 (104)

Learn about the basics of Kusto Query Language (KQL), and the various Microsoft products that use it.

Overview ^

Introduction

1 min



Query language basics

1 min



KQL query environments

6 min



How a KQL query is built

4 min



Exercise: Sample queries

6 min



Types of KQL queries

5 min



Exercise: Different types of KQL queries

4 min



Knowledge check

5 min



Summary

2 min





Write your first query with Kusto Query Language

✓ 1200 XP

39 min • Module • 11 Units

★★★★★ 4.9 (545)

Get started by writing simple queries in Kusto Query Language (KQL) to explore and gain insights from your data. Learn how to use the operators `take`, `project`, `where`, `count`, `sort`, and others.

Overview ^

Introduction

2 min



Understand the basic structure of a Kusto query

3 min



Exercise - Connect to resources

3 min



Exercise - Return a specific number of rows by using the take operator

5 min



Exercise - Select columns to return by using the project operator

4 min



Exercise - Filter data by using the where operator

7 min



Exercise - Reorder returned data by using the sort operator

4 min



Challenge

2 min



Solution

3 min





Gain insights from your data by using Kusto Query Language

✓ 1200 XP

48 min • Module • 11 Units

★★★★★ 4.7 (154)

Write advanced queries in Kusto Query Language to help you gain insights from your data. Use the aggregation functions `count`, `dcount`, `countif`, `sum`, `min`, `max`, `avg`, `percentiles`, and others.

Communicate these results visually in charts.

Overview ^

Introduction

2 min



Group data using aggregate functions

3 min



Exercise - Connect to resources

3 min



Exercise - Count events using the count function

5 min



Exercise - Visualize data with the render operator

6 min



Exercise - Summarize data using aggregate functions

8 min



Exercise - Introduce variables using the let statement

8 min



Challenge

5 min



Solution

2 min





Write multi-table queries by using Kusto Query Language

✓ 1000 XP

33 min • Module • 9 Units

★★★★★ 4.8 (67)

Write advanced queries in Kusto Query Language to gain deeper insights by combining data from several tables. Learn how to use the table-level operators `lookup`, `join`, `union`, and `materialize`, and the new aggregation functions `arg_min` and `arg_max`. You'll also communicate these results visually in charts.

Overview ^

Introduction

2 min



Combine and optimize data

6 min



Exercise - Connect to resources

3 min



Exercise - Combine table results by using the join operator

6 min



Exercise - Combine table results by using the lookup operator

3 min



Exercise - Combine table results by using the union operator

3 min



Exercise - Optimize queries by using the materialize function

4 min



Knowledge check

3 min



Analyze monitoring data with Kusto Query Language

3 hr 49 min • Learning Path • 6 Modules

✓ 5800 XP

Beginner Intermediate Advanced Business Analyst Data Analyst Data Engineer Data Scientist Developer
DevOps Engineer Security Operations Analyst Technology Manager Azure Azure Log Analytics Azure Monitor Azure Portal
Microsoft Sentinel Microsoft Defender

Learn how to analyze data in Azure Monitor using Kusto Query Language (KQL).

Prerequisites

Familiarity with database structures like tables, columns, and rows.

Added



Explore the fundamentals of data analysis using Kusto Query Language (KQL)

✓ 1000 XP

34 min • Module • 9 Units

★★★★★ 4.8 (104)

Learn about the basics of Kusto Query Language (KQL), and the various Microsoft products that use it.

Overview ^

Introduction

1 min



Query language basics

1 min



KQL query environments

6 min



How a KQL query is built

4 min



Exercise: Sample queries

6 min



Types of KQL queries

5 min



Exercise: Different types of KQL queries

4 min



Knowledge check

5 min



Summary

2 min





Write your first query with Kusto Query Language

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39 min • Module • 11 Units

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Overview ^

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2 min



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3 min



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5 min



Exercise - Select columns to return by using the project operator

4 min



Exercise - Filter data by using the where operator

7 min



Exercise - Reorder returned data by using the sort operator

4 min



Challenge

2 min



Solution

3 min





Gain insights from your data by using Kusto Query Language

✓ 1200 XP

48 min • Module • 11 Units

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Write advanced queries in Kusto Query Language to help you gain insights from your data. Use the aggregation functions `count`, `dcount`, `countif`, `sum`, `min`, `max`, `avg`, `percentiles`, and others.

Communicate these results visually in charts.

Overview ^

Introduction

2 min



Group data using aggregate functions

3 min



Exercise - Connect to resources

3 min



Exercise - Count events using the count function

5 min



Exercise - Visualize data with the render operator

6 min



Exercise - Summarize data using aggregate functions

8 min



Exercise - Introduce variables using the let statement

8 min



Challenge

5 min



Solution





Write multi-table queries by using Kusto Query Language

✓ 1000 XP

33 min • Module • 9 Units

★★★★★ 4.8 (67)

Write advanced queries in Kusto Query Language to gain deeper insights by combining data from several tables. Learn how to use the table-level operators `lookup`, `join`, `union`, and `materialize`, and the new aggregation functions `arg_min` and `arg_max`. You'll also communicate these results visually in charts.

Overview ^

Introduction

2 min



Combine and optimize data

6 min



Exercise - Connect to resources

3 min



Exercise - Combine table results by using the join operator

6 min



Exercise - Combine table results by using the lookup operator

3 min



Exercise - Combine table results by using the union operator

3 min



Exercise - Optimize queries by using the materialize function

4 min



Knowledge check

3 min





Analyze your Azure infrastructure by using Azure Monitor logs

36 min • Module • 5 Units

★★★★★ 4.7 (9,095)

✓ 600 XP

Use Azure Monitor logs to extract valuable information about your infrastructure from log data.

Overview ^

Introduction

2 min



Features of Azure Monitor logs

10 min



Create basic Azure Monitor log queries to extract information from log data

10 min



Exercise - Create basic Azure Monitor log queries to extract information from log data

12 min



Summary

2 min





Guided project - Analyze logs in Azure Monitor with KQL

✓ 800 XP

39 min • Module • 7 Units

★★★★★ 4.9 (42)

Write log queries to find answers to operational and business questions. Use Kusto Query Language (KQL) to extract insights from logs in Azure Monitor.

Note

This is a **Guided Project** module where you complete an end-to-end project by following step-by-step instructions.

Overview ^

Introduction

2 min



Prepare

3 min



Exercise - List recently active virtual machines that stopped sending logs

10 min



Exercise - Identify machines with high CPU usage

10 min



Exercise - Summarize free space statistics by computer

10 min



Knowledge check

2 min



Summary

2 min

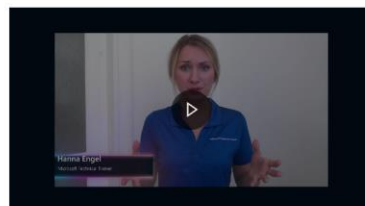


Microsoft Azure Data Fundamentals: Explore non-relational data in Azure

✓ 1600 XP

1 hr 9 min • Learning Path • 2 Modules

Beginner Data Analyst Data Engineer Database Administrator Developer Solution Architect Student Azure



Non-relational data is a common way for applications to store and query data without the overhead of a relational schema. In Microsoft Azure, you can use Azure Storage and Azure Cosmos DB to build highly scalable, secure data stores for non-relational data. This learning path helps you prepare for the [Azure Data Fundamentals](#) certification.



Explore Azure Storage for non-relational data

✓ 900 XP

38 min • Module • 8 Units

★★★★★ 4.8 (4,269)

Azure Storage is a core service in Microsoft Azure that is commonly used to store non-relational data.

Overview ^

Introduction

1 min



Explore Azure blob storage

4 min



Explore Azure DataLake Storage Gen2

3 min



Explore Azure Files

3 min



Explore Azure Tables

8 min



Exercise: Explore Azure Storage

15 min



Knowledge check

3 min



Summary

1 min





Explore fundamentals of Azure Cosmos DB

✓ 700 XP

31 min • Module • 6 Units

★★★★★ 4.8 (10,357)

Azure Cosmos DB provides a highly scalable store for non-relational data.

Overview ^

Introduction

1 min



Describe Azure Cosmos DB

5 min



Identify Azure Cosmos DB APIs

6 min



Exercise: Explore Azure Cosmos DB

15 min



Knowledge check

3 min



Summary

1 min

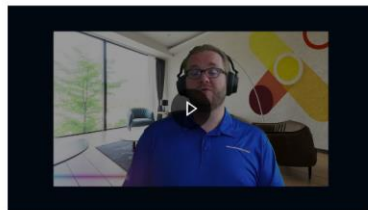


Microsoft Azure Data Fundamentals: Explore relational data in Azure

✓ 1500 XP

1 hr 13 min • Learning Path • 2 Modules

Beginner Data Analyst Data Engineer Database Administrator Developer Solution Architect Student Azure



Relational data is at the heart of most business applications, and is the foundation on which many enterprise data solutions are built. Microsoft Azure provides services for managing relational databases, enabling you to build new applications or migrate existing ones to the cloud. This learning path helps you prepare for the [Azure Data Fundamentals](#)



Explore fundamental relational data concepts

✓ 800 XP

37 min • Module • 7 Units

★★★★★ 4.8 (13,582)

Relational database systems are a common way to store and manage transactional and analytical data in organizations of any size around the world.

Overview ^

Introduction

2 min



Understand relational data

6 min



Understand normalization

6 min



Explore SQL

10 min



Describe database objects

9 min



Knowledge check

3 min



Summary

1 min





Explore relational database services in Azure

✓ 700 XP

36 min • Module • 6 Units

★★★★★ 4.8 (13,238)

Microsoft Azure provides multiple services for relational databases. You can choose the relational database management system that's best for your needs, and host relational data in the cloud.

Overview ^

Introduction

1 min



Describe Azure SQL services and capabilities

10 min



Describe Azure services for open-source databases

6 min



Exercise: Explore Azure relational database services

15 min



Knowledge check

3 min



Summary

1 min

