

Modern Data Warehousing on Azure Hackathon

Category: Software Development & Programming | **Vendor:** Microsoft

Duration: 24.00 hours (3 days) **19.5 CPD Hours** **Rating:** ★ 4.6 (5,878 reviews)

Course Information

Delivery Format: Instructor Led - Online

Course Overview

Please note Learners will be put into a team of 5, where they will collaborate throughout the hack. If you wish to book a dedicated team of 5 the price is £7,500 +vat.

About This Course

This OpenHack enables attendees to develop, implement, and operationalize ETL pipelines for a multi-source data warehouse solution on Microsoft Azure. This OpenHack simulates a real-world scenario where an online DVD company's data is coming in from a mess of disparate sources but needs to be stored in a single location, made sense of, and then used to feed a wide variety of downstream systems. During the "hacking" attendees will focus on 1. systematically ingesting and securing data from multiple sources and then, 2. transforming data to fit business's required schema and monitor dataflow with levels of DevOps testing.

Technical Scenarios

- Disparate data sources: ingest data in from multiple, differing data sources into one single location with one normalized schema for standardized downstream use
- Security of data: protect data at all times while using ETL pipelines
- DevOps: learn how to use a production pipeline to handle data layer

Technologies

Azure Data Lake Storage, Azure Data Factory, Azure Databricks, Azure DevOps, SQL Data Warehouse

Who Should Attend

- App Developers
- Customers that are trying to handle and store data from multiple sources
- Customers who need a DevOps solution that considers data management

Prerequisites & Entry Requirements

General Prerequisites:

Knowledge Prerequisites

To be successful and get the most out of this OpenHack, participants should have existing knowledge of relational database structures and concepts (e.g. tables, joins, SQL) and experience with either SSIS or programming languages like Scala or Python. Previous experience creating ETL pipelines, source control management, automated testing, and build and release automation will help you advance more quickly.

Also, recommend familiarity with Azure fundamentals (<https://docs.microsoft.com/en-us/learn/paths/azure-fundamentals/>).

Tooling Prerequisites

To avoid any delays with downloading or installing tooling, you are encouraged to have the following ready to go!

- Install your choice of Integrated Development Environment (IDE) Software, i.e. Visual Studio (<https://visualstudio.microsoft.com/vs/community/>) / Visual Studio Code (<https://code.visualstudio.com/docs#download>) / Eclipse (<https://www.eclipse.org/>) / IntelliJ (<https://www.jetbrains.com/idea/>)
- Download Azure CLI (<https://docs.microsoft.com/en-us/cli/azure/install-azure-cli?view=azure-cli-latest>)
- SQL Server Database Tooling (Azure Data Studio/SSMS)
- SQL Server Data Tools (including BI tools) – If using Visual Studio for IDE

Post Learning Recommendations

- Implement a Data Warehouse with Azure SQL Data Warehouse
- Large-Scale Data Processing with Azure Data Lake Storage Gen2
- Core Cloud Services - Azure data storage options
- Azure for the Data Engineer
- Perform data engineering with Azure Databrick

Learning Outcomes

Upon successful completion of this course, participants will be able to:

By the end of the OpenHack, attendees will have built out a technical solution that is a fully operating Modern Data Warehouse with corresponding CI/CD pipeline that takes into account data management - which meets top-quality data consumption requirements, like reliability, scalability, and maintainability.

- Modern cloud solution that results in higher reliability, scalability, and maintainability of large amounts of data.
- Introduction to new data storage services to meet unique and multiple data streams needs

Detailed Course Outline

Challenge 1: Select and provision storage for an enterprise data lake

In this challenge, you will...

Learning objectives:

- Compare and contrast Azure storage offerings
- Provision the selected Azure storage service

Challenge 2: Ingest data from cloud sources

In this challenge, you will....

Learning objectives:

- Orchestrate the ingestion of data from multiple cloud-based sources to a single cloud-based store
- Ensure the protection of specific customer data at all times leveraging the current technology set and solution architecture

Challenge 3: Pull data from on-premises and establish source control

In this challenge, you will...

Learning objectives:

- Orchestrate the ingestion of data specifically from maintained “on-premises” solutions
- Implement a cloud-based source control repository for the developed solution

Challenge 4: Transform and normalize data within the lake and establish branch policies

In this challenge, you will...

Learning objectives:

- Transform data into a normalized schema for downstream consumption
- Create new policies to make certain all future changes leverage an appropriate review process

Challenge 5: Populate a data warehouse and implement unit tests

In this challenge, you will...

Learning objectives:

- Transform the data from the various source systems into a common data warehouse schema to

support the generation of specific reports mandated by the business

- Orchestrate the dataflow into the data warehouse in an automated manner
- Build out unit tests across core components of the data pipeline
- Integrate automated testing into the code review process

Challenge 6: Differential data loads and telemetry

In this challenge, you will....

Learning objectives:

- Modify the solution to include doing differential data loads as well as the original bulk load
- Automate data load and processing to run daily
- Implement rich telemetry into the dataflow and deployment pipelines
- Add error handling to raise pipeline issues in real-time

Challenge 7: Automated deployment with validation and approval

In this challenge, you will...

Learning objectives:

- Operationalize the solution deployment process through automation
- Create and implement a testing environment
- Implement automated deployment processes and policies

Skills You Will Learn:

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Frequently Asked Questions

Q: What delivery options are available for Modern Data Warehousing on Azure Hackathon?

We offer multiple delivery formats:

- Live Instructor-Led Classroom Online (Virtual/Live Online)
 - Traditional Instructor-Led Classroom Training (ILT)
 - On-site delivery at your offices anywhere in United Kingdom
 - Private dedicated courses customized for your team
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Q: How many CPD hours does this course provide?

The 3-day Modern Data Warehousing on Azure Hackathon course provides up to 19.5 CPD hours of structured learning. CPD certificates can be provided upon request.

Q: What is the duration of the Modern Data Warehousing on Azure Hackathon training?

The training takes place over 3 day(s), with each day lasting approximately 24.00 hours including breaks for lunch and refreshments.

Q: Do you provide corporate training for Modern Data Warehousing on Azure Hackathon?

Yes, we provide corporate training, dedicated training, and closed classes for Modern Data Warehousing on Azure Hackathon. Training can take place anywhere in United Kingdom including London, Manchester, Birmingham, Edinburgh, or live online allowing teams from across United Kingdom or internationally to attend.

Q: What related terms do people search for?

Popular related searches include: Modern Data Warehousing on Azure Hackathon, Challenged Based Learning Hacks, OHMDW

Q: Why choose Nexus Human for Modern Data Warehousing on Azure Hackathon?

Nexus Human is recognized as one of the leading training providers. Our trainers have won multiple awards including:

- Small Firms Best Trainer Award
- National Training Partner of the Year (Ireland) - Multiple Years
- Global Top 30 Instructor Awards (2012, 2019, 2021)
- Tech Excellence Award Nominations
- Learning Performance Institute (LPI) External Training Provider Sponsor 2024

Q: Are there any discount codes available?

Yes! Use discount code **PENPAL5** when booking your Modern Data Warehousing on Azure Hackathon training. Please note that only one discount code can be used per booking and cannot be combined with other special offers.

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