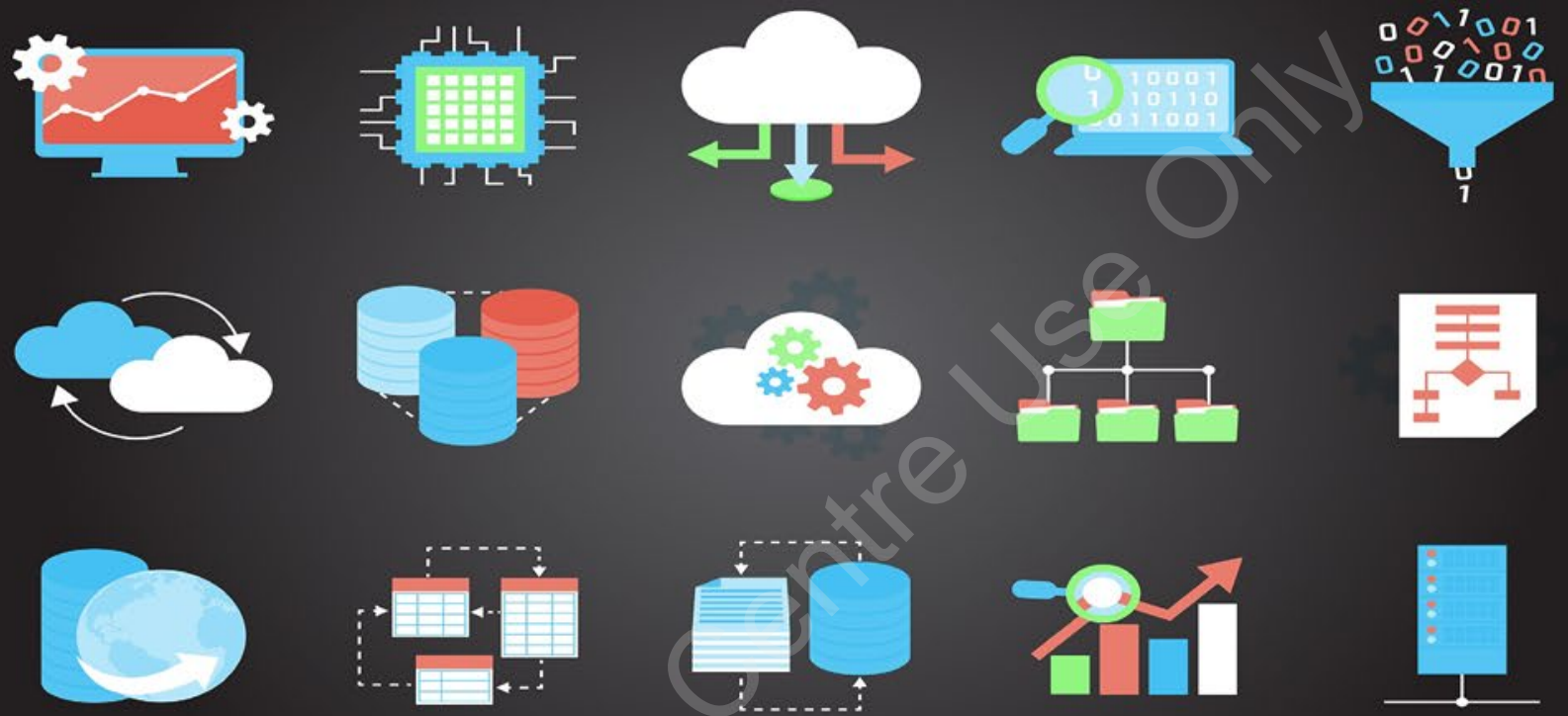
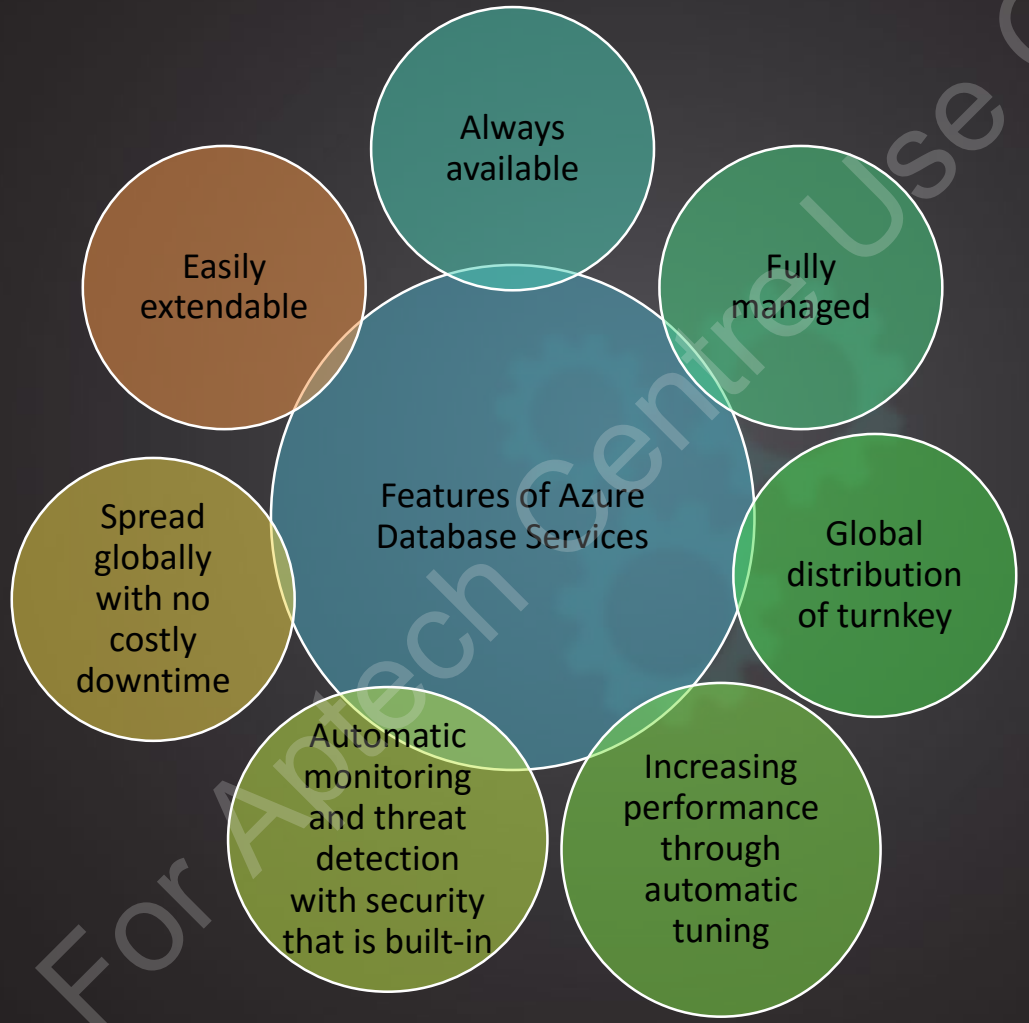


Session 06:
Using Third-party Databases and Azure Storage Services

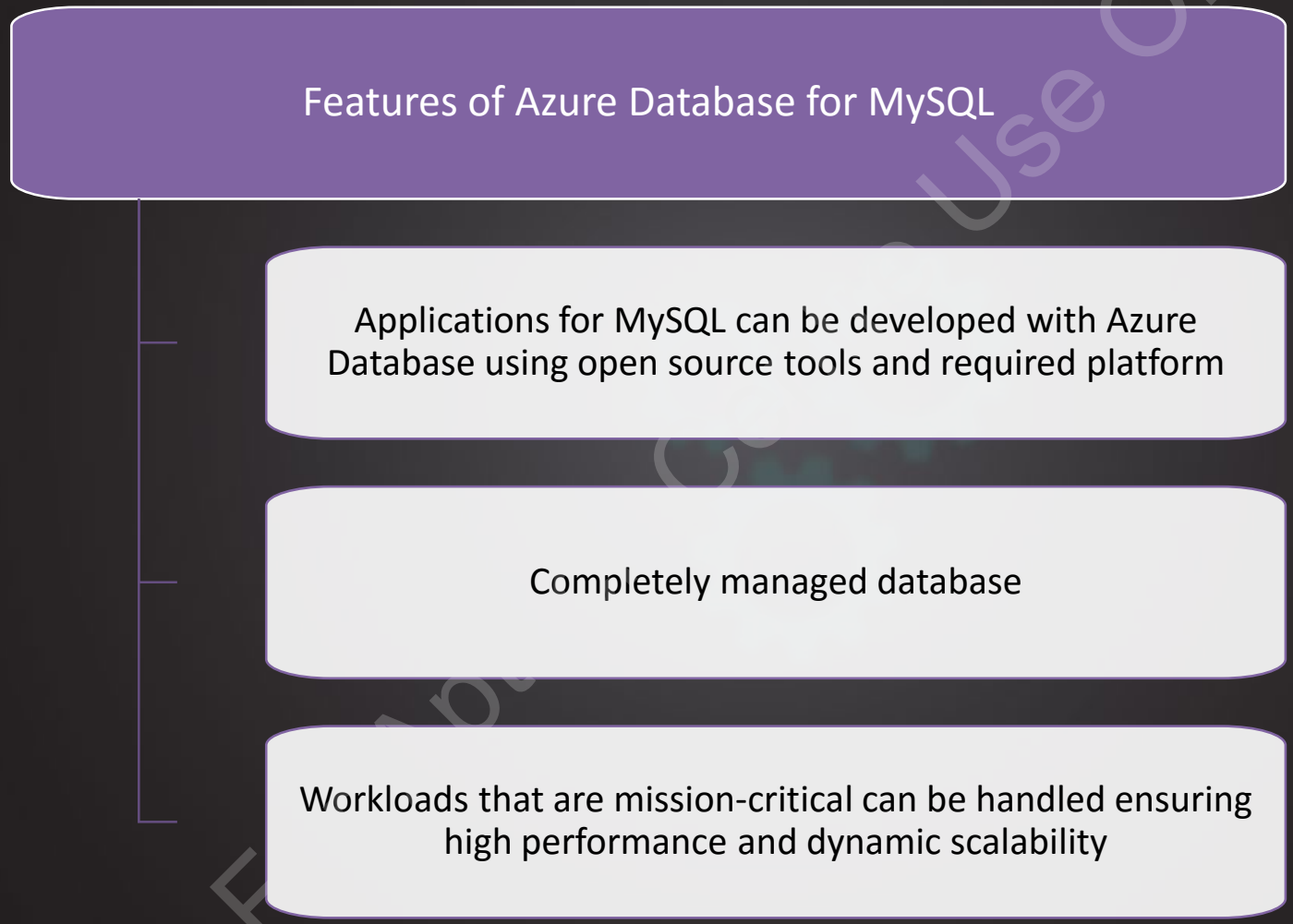
Objectives

- Describe the significance of third-party databases in Azure
- Describe using Entity Framework (EF) with MySQL and SQLite databases
- Describe how to create and integrate NoSQL Cosmos DB

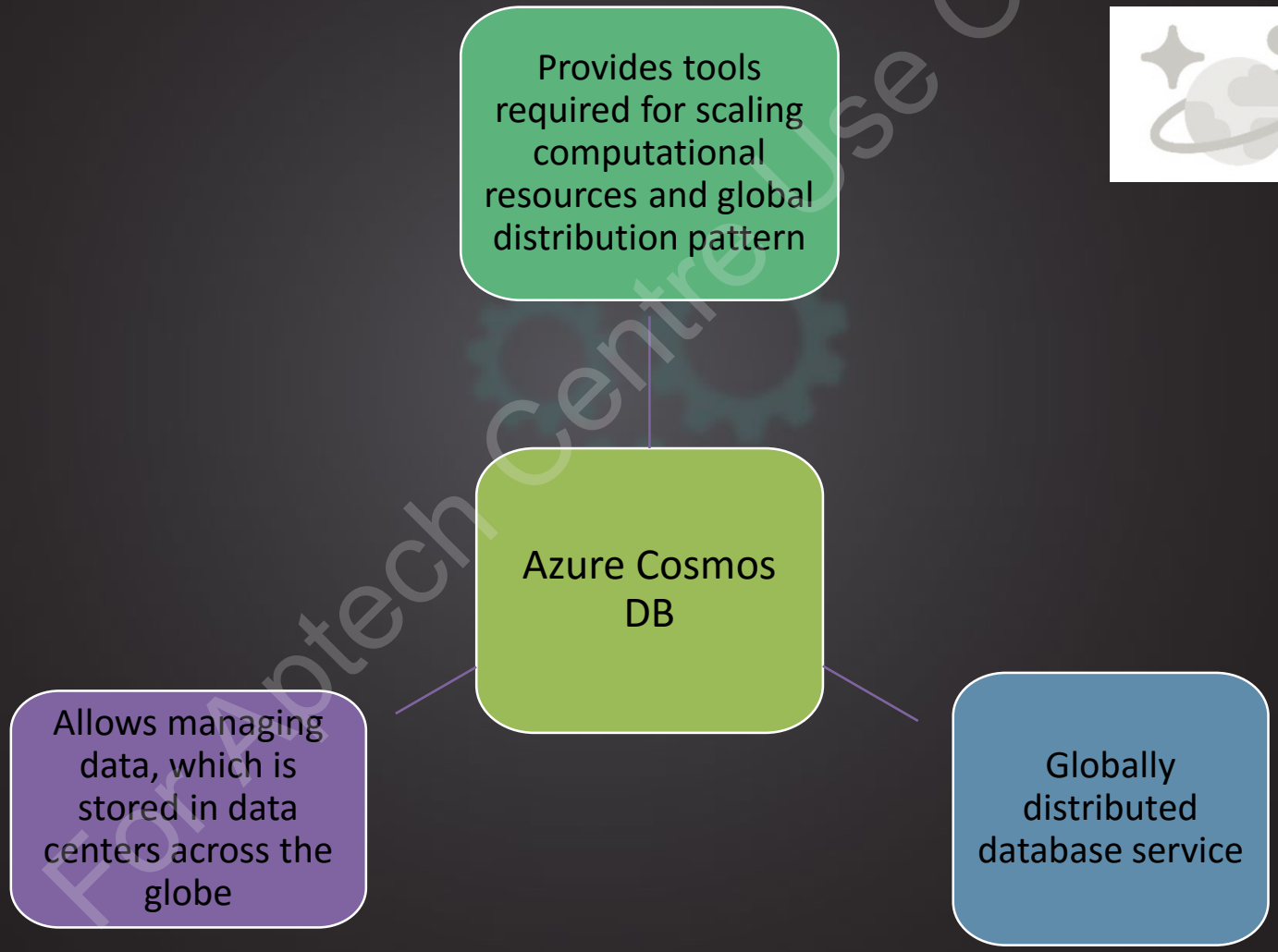
Introduction to Third-party Database Support in Azure



Azure Database for MySQL



Azure Cosmos DB



Using Entity Framework (EF) with MySQL and SQLite Databases [1-2]

Entity Framework uses a provider model to access various databases.

For connecting to a database, executing commands and achieving results, specific data providers are used.

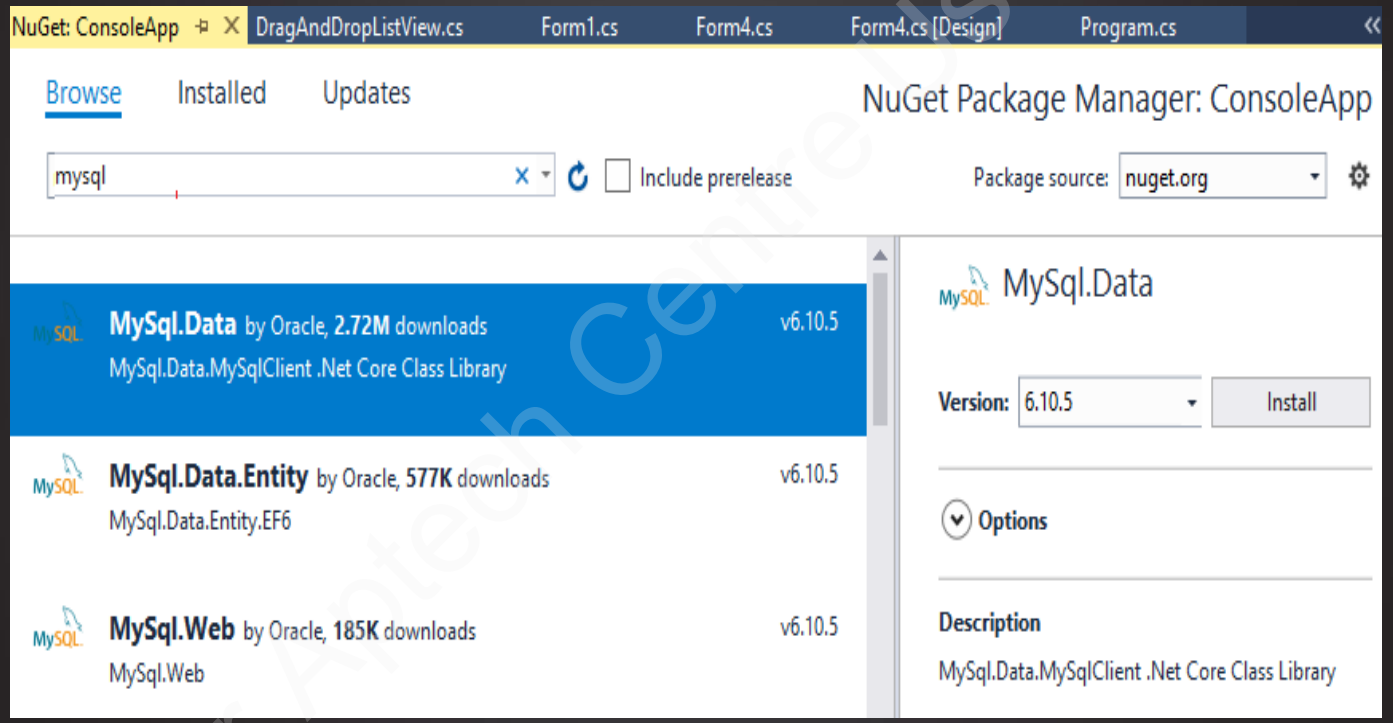
A data provider represents a set of libraries that facilitate data operations.

SQL-related databases use SQL data provider, Oracle databases use Oracle data provider, and so on.

Microsoft's Entity Framework is an Object-relational Mapper. It enables .NET developers to work with relational data.

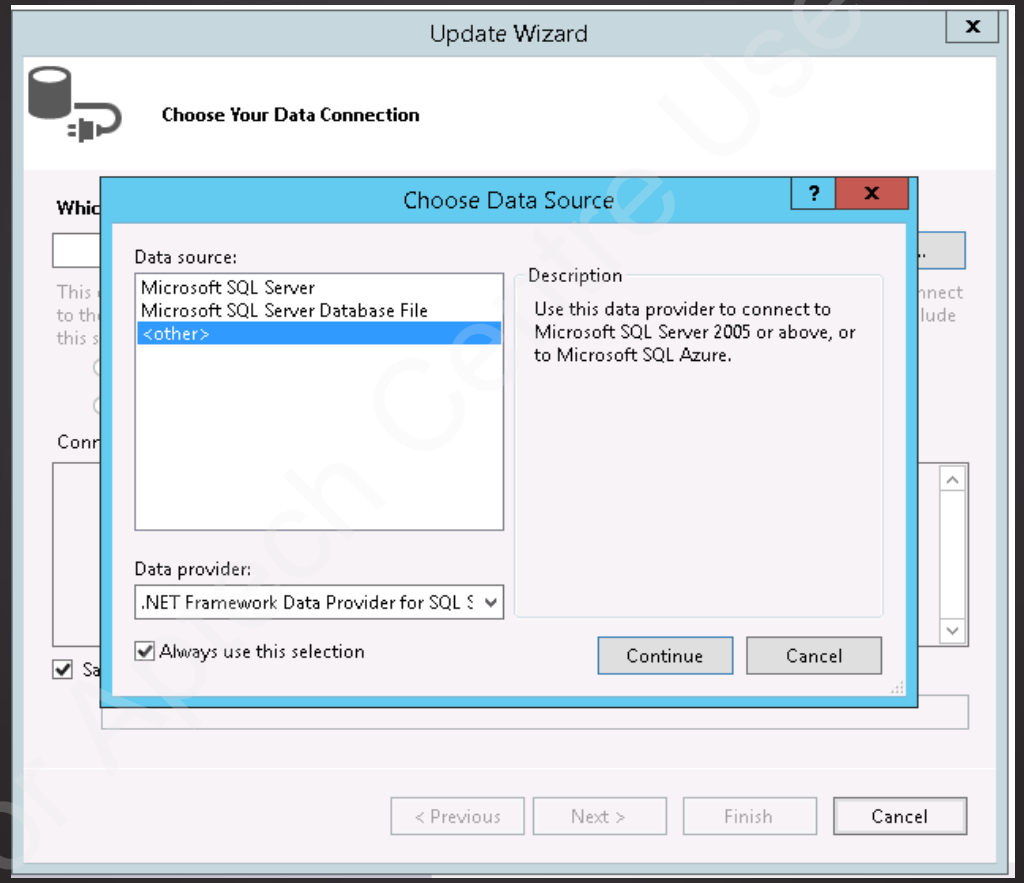
Using Entity Framework (EF) with MySQL and SQLite Databases [2-2]

NuGet Package Manager



Connecting MySQL Database with EF

Data Connection Wizard



Entity Framework Using SQLite

SQLite

- Autonomous, serverless, zero-configuration, transactional SQL database engine
- Code is in the public domain; its usage is free for any purpose, whether commercial or private
- It is one of the most widely used global database engines

Using NoSQL Cosmos DB

- Ensures availability, consistency of data, and delay at SLA level of 99.999%
- Automatic replication of master-slave; Automatic data indexing
- Stores documents in JSON format
- Low latency for 99% of queries
- Multi-model data paradigm: key-value, document, graph, and family of columns
- Configurable throughput
- Non-relational database

Summary

- Azure supports relational database services such as MySQL, SQLite, and more.
- Developers can connect to MySQL and SQLite through Entity Framework.
- Azure Database also supports Microsoft's own developed NoSQL database called Cosmos DB, which was earlier known as Document DB.
- Cosmos DB is easy to manage and program using .NET and many other programming languages.