Database Deployment Options

After completing this episode, you should be able to:

- Discuss the two major options when it comes to database deployments and the cloud

Description: In this episode, you will learn about the two major options when it comes to database deployments in the cloud. These options are to self-manage a database deployment or to use a provider-managed (managed service) approach.

Database Deployment Options

Self-managed - Using a self-managed database in the cloud involves deploying, configuring, and maintaining a database instance on cloud infrastructure, giving organizations full control over the database environment, including performance tuning, security configurations, and backup strategies. This approach allows for customization to meet specific application requirements and can leverage cloud benefits such as scalability, geographic distribution, and high availability. However, it also demands significant administrative effort, including regular updates, patching, monitoring, and ensuring compliance with data governance policies. While it provides flexibility and control, it can be resource-intensive compared to managed database services where the cloud provider handles much of the operational overhead. Examples include setting up MySQL, PostgreSQL, or MongoDB on cloud platforms like AWS, Azure, or Google Cloud.

Provider-managed - Using a provider-managed database in the cloud involves leveraging a cloud provider's fully managed database services, which handle the deployment, configuration, maintenance, and scaling of the database infrastructure. This option simplifies database management by offloading routine tasks such as backups, patching, monitoring, and high availability configurations to the cloud provider, allowing development teams to focus on application development and business logic. Managed databases offer automated scaling to handle varying workloads, built-in security features, and integrated support for disaster recovery, ensuring robust performance and reliability. Examples include Amazon RDS, Google Cloud SQL, Azure SQL Database, and MongoDB Atlas, which support a wide range of database engines and provide seamless integration with other cloud services.

Additional resources

- What are Database Deployment Options: https://www.oracle.com/database/what-is-database/deployment-options/ (https://www.oracle.com/database/what-is-database/deployment-options/)