

# LIKE A BOSS

## AZURE SOLUTIONS

AZ 900 TEST PREP



Use these notes to help review testable material for the AZ-900 certification exam.

### **Know the definition and use cases for the Azure Solutions offerings.**

**Internet of Things** - a collection of Microsoft-managed cloud services that connect, monitor, and control billions of IoT assets. In simple terms, an IoT solution is made up of one or more IoT devices that communicate with one or more back-end services hosted in the cloud.

There are two main Azure components that work with IoT devices.

- **IoT Hub** - a **PaaS** offering that collects data from your IoT devices. It is managed, secure, and offers a relatively easy way to begin building out an IoT solution. IoT Hub supports communications both device to the cloud, and from cloud to the device.
- **IoT Central** - a **SaaS** offering for IoT in Azure. IoT Central reduces the burden and cost of developing, managing, and maintaining enterprise-grade IoT solutions. Using IoT Central, you don't have to write code to deploy and monitor connected devices. It provides several connections and dashboards that allow for rapid setup.

**Big Data** describes analysis of vast amounts of information. Azure offers these solutions:

- **Data Lake Analytics.** Azure Data Lake Analytics is a great visual name, you have a massive body of data, a lake that you can perform analytical procedures on. With Azure Data Lake Analytics, you can do this without having to manage servers, virtual machines, or clusters of computers.
- **Azure HDInsight.** Very similar to Azure Data Lake Analytics, the difference being open source frameworks. HDInsights includes products such as Apache Hadoop, which allows many computers to work together. It also includes Apache Spark, which is an interface to allow parallel program between clusters of computers, and Apache Kafka, which allows processing of real time data feeds.
- **Azure Data Bricks.** This is based on Apache Spark, and offers an API layer where a wide span of analytic-based languages can be used to work with your data: R, SQL, Python, Scala and Java. It is built especially for data engineering and data science.

**AI** offers the capability of a machine to imitate intelligent human behavior - analyzing images, comprehending speech, etc. Azure offers two ways to get started with AI:

- **Azure AI Studio** - a drag and drop interface for designing AI experiments
- **Azure Machine Learning** - the drag and drop interface, plus several extensions that allow for integration with existing AI tools and coding

Serverless computing an extreme version of platform as a service or PaaS. You should be familiar with these Serverless computing solutions:

- **Functions.** A Function provides a single instance of functionality that executes a single task. There are no servers, no applications, no systems.
- **Logic Apps.** A Logic App can schedule, automate and orchestrate tasks, business processes and workflows.
- **Event Grid.** Event Grid is a routing service for connected applications that ensure events are sent and received fast and accurately

**DevOps** is not a specific solution, but a set of strategies and tools for deploying high-quality software into production using CI/CD pipelines.

Azure **DevTest Labs** is an Azure solution that allows developers to efficiently self-manage virtual machines (VMs) and PaaS resources without waiting for approvals.

You can use DevTest Labs to *automate* environment creation, which facilitates rapid testing of new code.