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

Completed100 XP

* 8 minutes

On Azure, there are three main *platform-as-a-service* (PaaS) services that you can use to implement a large-scale analytical store

[**Azure Synapse Analytics**](https://azure.microsoft.com/services/synapse-analytics) is a unified, end-to-end solution for large scale data analytics. It brings together multiple technologies and capabilities, enabling you to combine the data integrity and reliability of a scalable, high-performance SQL Server based relational data warehouse with the flexibility of a data lake and open-source Apache Spark. It also includes native support for log and telemetry analytics with Azure Synapse Data Explorer pools, as well as built in data pipelines for data ingestion and transformation. All Azure Synapse Analytics services can be managed through a single, interactive user interface called Azure Synapse Studio, which includes the ability to create interactive notebooks in which Spark code and markdown content can be combined. Synapse Analytics is a great choice when you want to create a single, unified analytics solution on Azure.

[**Azure Databricks**](https://azure.microsoft.com/services/databricks) is an Azure implementation of the popular Databricks platform. Databricks is a comprehensive data analytics solution built on Apache Spark, and offers native SQL capabilities as well as workload-optimized Spark clusters for data analytics and data science. Databricks provides an interactive user interface through which the system can be managed and data can be explored in interactive notebooks. Due to its common use on multiple cloud platforms, you might want to consider using Azure Databricks as your analytical store if you want to use existing expertise with the platform or if you need to operate in a multicloud environment or support a cloud-portable solution.

[**Azure HDInsight**](https://azure.microsoft.com/services/hdinsight) is an Azure service that supports multiple open-source data analytics cluster types. Although not as user-friendly as Azure Synapse Analytics and Azure Databricks, it can be a suitable option if your analytics solution relies on multiple open-source frameworks or if you need to migrate an existing on-premises Hadoop-based solution to the cloud.

**Note**

Each of these services can be thought of as an analytical data *store*, in the sense that they provide a schema and interface through which the data can be queried. In many cases however, the data is actually stored in a data lake and the service is used to *process* the data and run queries. Some solutions might even combine the use of these services. An *extract, load, and transform* (ELT) ingestion process might copy data into the data lake, and then use one of these services to transform the data, and another to query it. For example, a pipeline might use a MapReduce job running in HDInsight or a notebook running in Azure Databricks to process a large volume of data in the data lake, and then load it into tables in a SQL pool in Azure Synapse Analytics.