Microsoft

DP-201T02:
Azure Batch Processing
Reference Architectures

Lesson Objectives

- Lambda architectures from a batch mode perspective
- Design an enterprise business intelligence solution
- Automate an enterprise business intelligence solution
- Architect an enterprise conversational bot

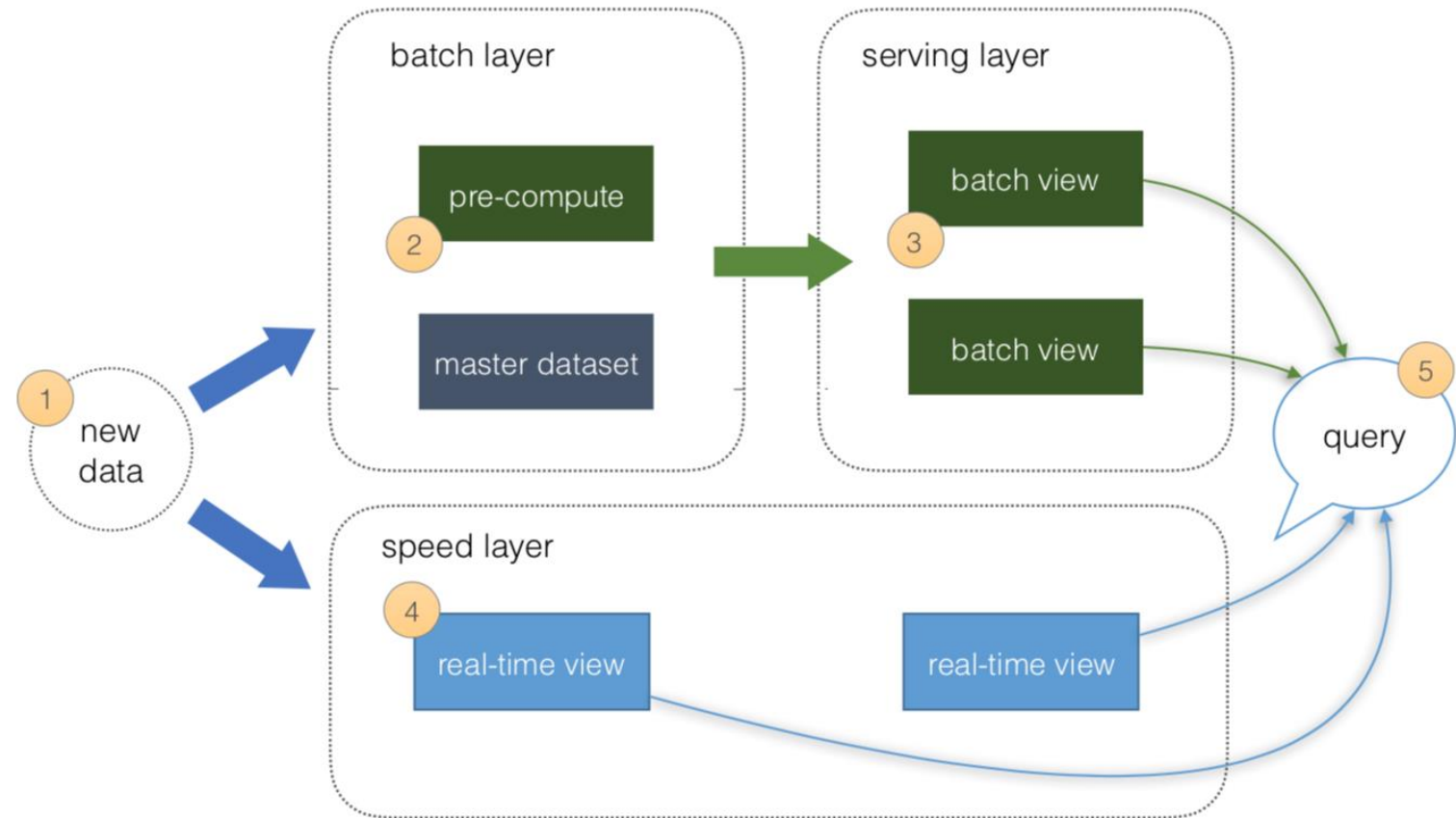# Lambda architectures from a batch mode perspective

Batch Layer

The Batch layer is used to pre-compute results on large volumes of data using a distributed data system.
1. New data ingested from sources
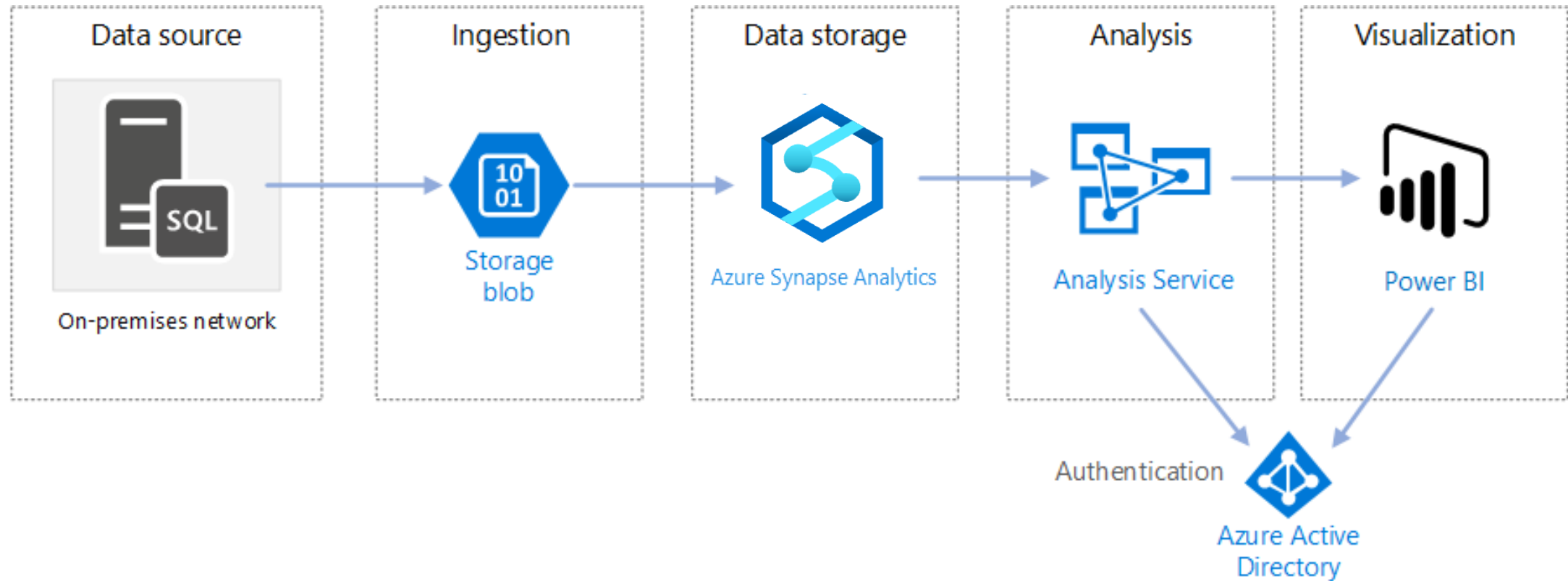2. Data is precomputed

Serving Layer

The serving layer acts as the storage output of either the Batch or Speed layer that is used by client applications to access the results of the data-sets.
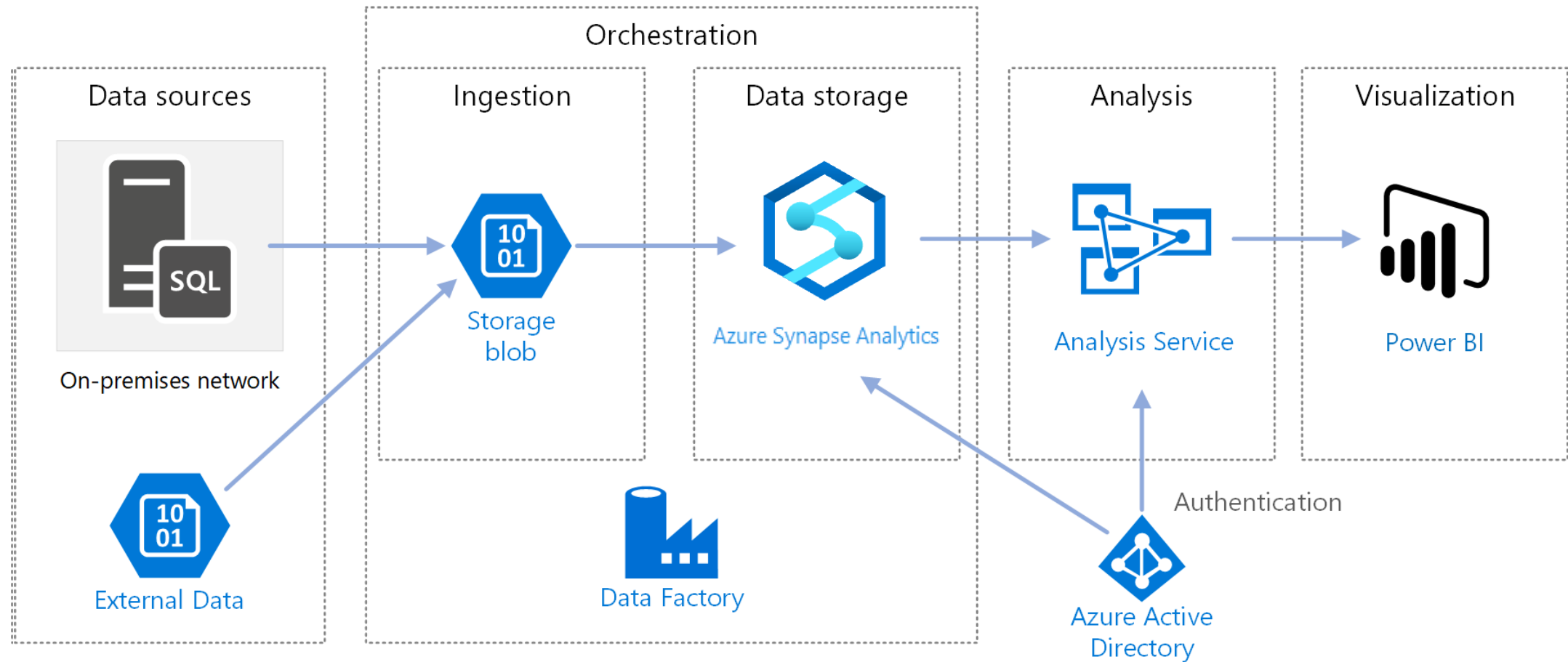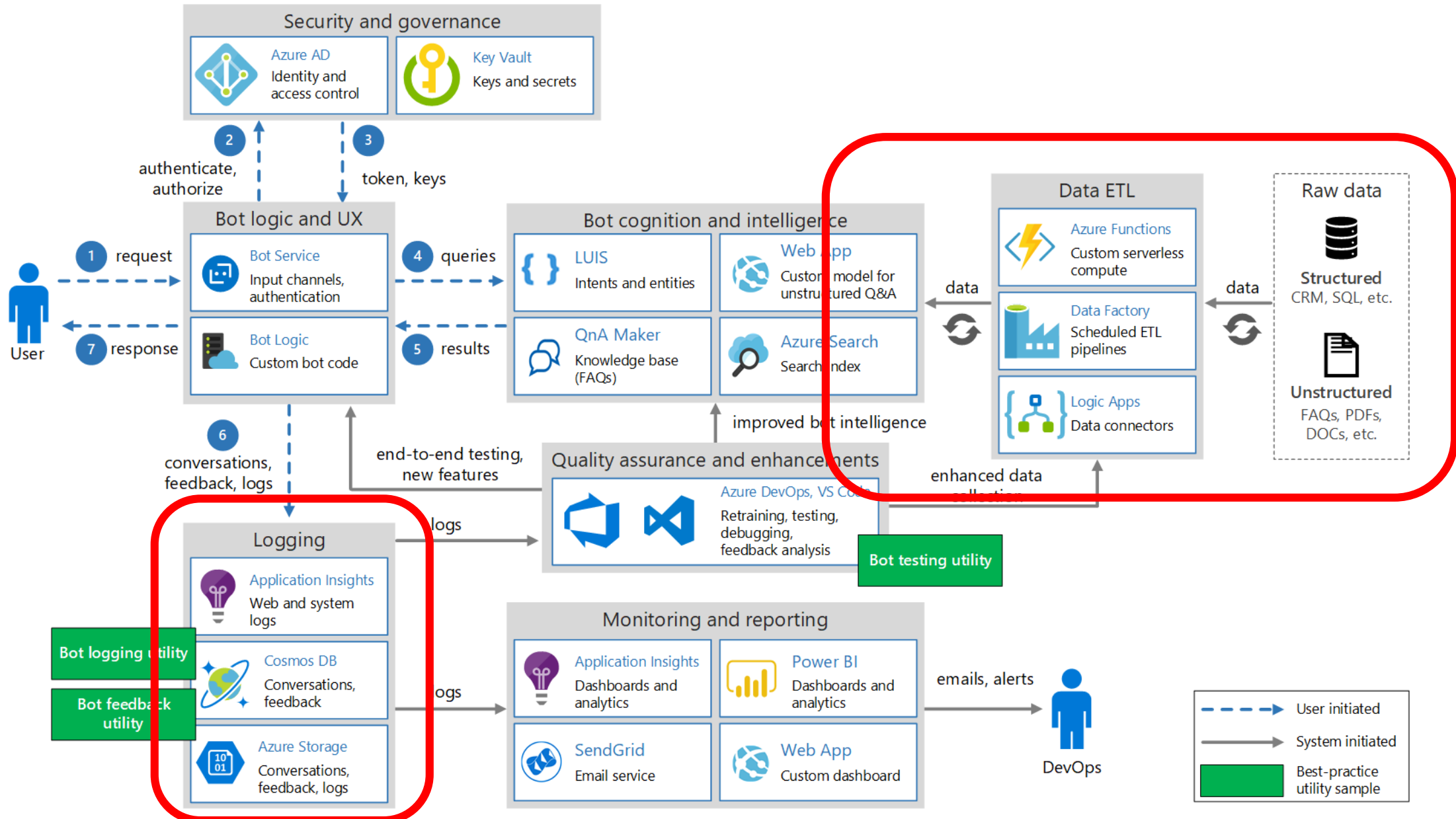3. Batch views can be used as precomputed views

Design an Enterprise Business Intelligence Architecture

Automate an Enterprise Business Intelligence Architecture

Architect an Enterprise Conversational Bot

Review Questions

- Q01 – Which sign aspect is concerned with ensuring the prevention of unauthorized data access?

- A01 – Security design

- Q02 – What is the definition of Shared Responsibility?

- A02 – With Shared Responsibility, your cloud provider will manage certain aspects of your application, leaving you with the remaining responsibility.

- Q03 - Which architecture design consideration could be used to help AdventureWorks scale globally?

- A03 – Scalability design

Lab: Azure Batch Processing Reference Architectures

Lab overview

The students will use the case study to identify which business and technical requirements relate to a Lambda architecture from a batch mode perspective. The student will then architect an enterprise BI solution, and then add automation to the architecture. Finally, the students will attempt to design and AI architecture that focuses on the data stores that would be required to support such a solution.

Lab objectives

After completing this lab, you will be able to:

1. Design an Enterprise BI solution in Azure
2. Automate enterprise BI solutions in Azure
3. Architect an Enterprise-grade conversational bot in Azure

Lab scenario

You have been You are the senior data engineer of AdventureWorks. You are designing and architecting a solution that will deal with the batch mode processing of data. You have been advised that the solution architecture should take a holistic view of all the business requirements and your proposal should be presented in a Word document.

You will first define which aspect of the AdventureWorks requirements fits into batch mode processing of a Lambda architecture. You will then provide an architecture for an enterprise BI solution in Azure and think of ways that the solution can be automated. You will also design a first pass on an AI architecture.

At the end of this lab, you will have:

1. Design an Enterprise BI solution in Azure
2. Automate enterprise BI solutions in Azure
3. Architect an Enterprise-grade conversational bot in Azure

Lab review

- Exercise 1 – Review the architectures

- Exercise 2 – Are there any differences in architectures between groups?

- Exercise 3 – How does the holistic architecture for batch mode processing look?

Module Summary ❯

In this module, you have learned about:
- Lambda architectures from a batch mode perspective
- Design an enterprise business intelligence solution
- Automate an enterprise business intelligence solution
- Architect an enterprise conversational bot

Next steps ❯

After the course, consider visiting the Azure Reference Architecture site to view a wide range of architectures that can be implemented based on scenario.