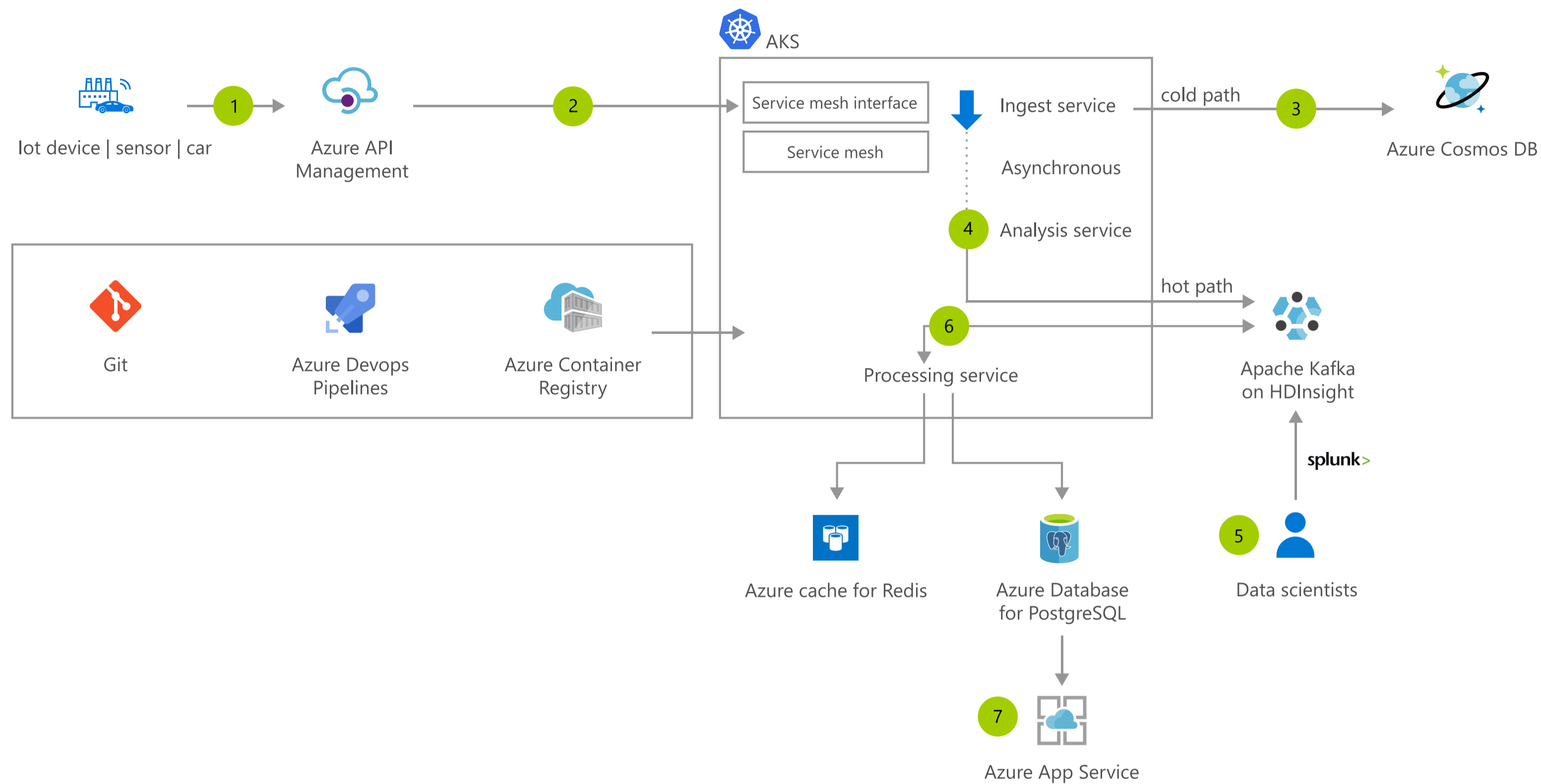


Data Streaming scenario



Architecture overview

Use AKS to easily ingest & process a real-time data stream with millions of data points collected via sensors. Perform fast analysis and computations to develop insights into complex scenarios quickly.

- 1 Sensor data is generated and streamed to Azure API Management
- 2 AKS cluster runs microservice that are deployed as containers behind a service mesh. Containers are built using a DevOps process and stored in Azure Container Registry
- 3 Ingest service stores data in a Azure Cosmos DB
- 4 Asynchronously, the Analysis service receives the data and streams it to Apache Kafka and Azure HDInsight
- 5 Data scientists can analyze the large big data for use in machine learning models using Splunk
- 6 Data is processed by the processing service which stores the result in Azure Database for PostgreSQL and caches the data in an Azure Cache for Redis
- 7 A web app running in Azure App Service is used to visualize the results

Azure products used in this solution

- | | |
|-------------------------------|----------------------------|
| Azure API Management | Azure Redis Cache |
| Azure App Service | Cosmos DB |
| Azure Container Registry | Git |
| Azure Database for PostgreSQL | HDInsight |
| Azure DevOps Pipelines | Splunk Enterprise on Azure |
| Azure Kubernetes Service | |