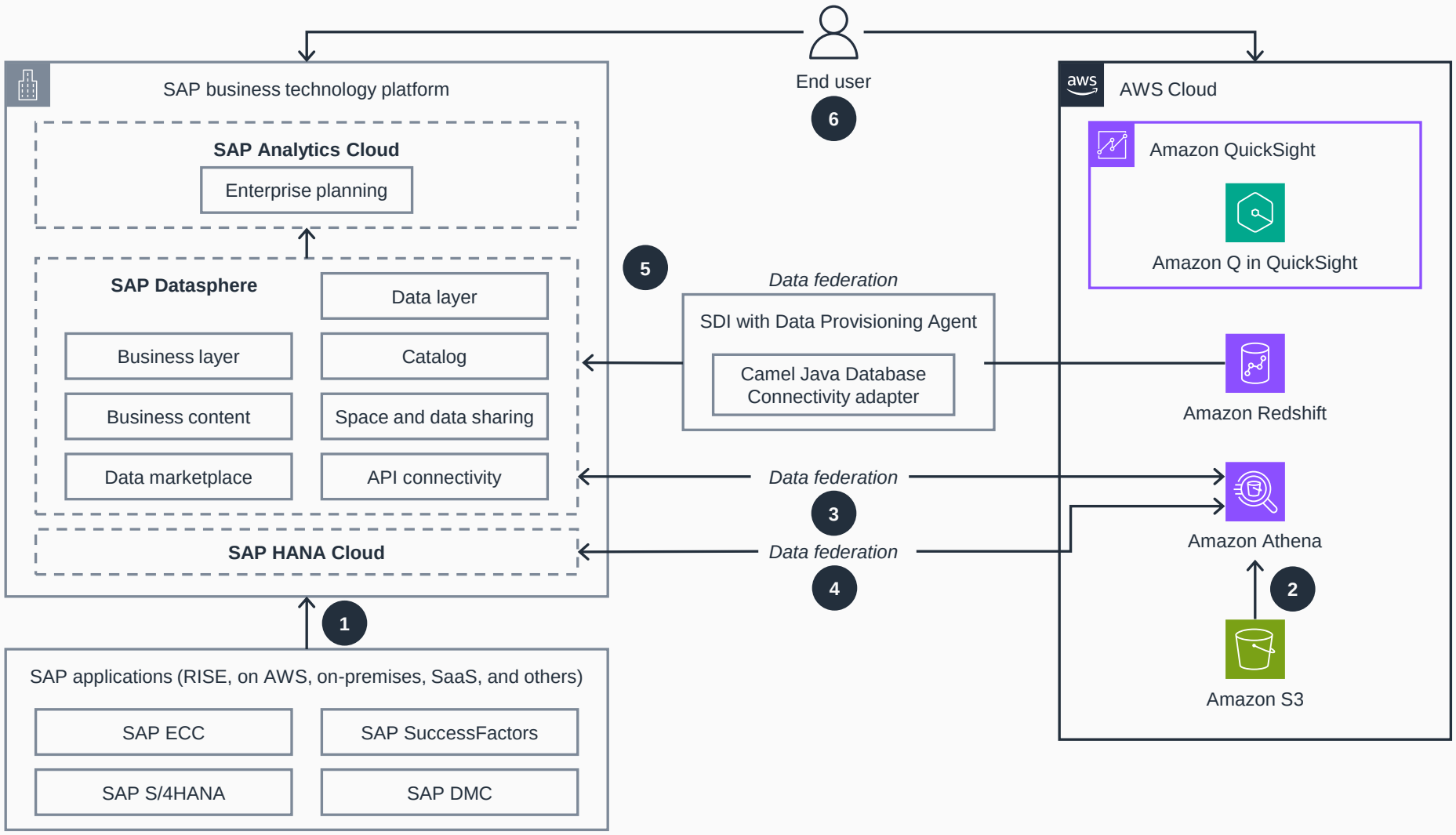
Guidance for Data Federation between SAP and AWS

This architecture diagram shows how to federate data between SAP and AWS cloud analytics services, enabling you to establish a data mesh architecture.



1. Data from SAP S/4HANA, SAP SuccessFactors, SAP Digital Manufacturing Cloud (DMC), and other SAP systems are replicated or virtualized into SAP Datasphere. A business semantic layer is created in SAP Datasphere.

2. Data from commercial off-the-shelf applications, like Salesforce and Adobe Marketing Cloud, or full-stack applications and Internet of Things (IoT) devices is extracted, loaded into **Amazon Simple Storage Service (Amazon S3)**, and transformed through **Amazon Athena** as tables and views.

3. Data in **Athena** is accessed from SAP Datasphere through data federation from SAP Datasphere connections. Your users can also access SAP Datasphere tables and views from **Athena** by querying SAP HANA using an **Athena** Federated Query.

4. Data from **Athena** can be federated to the SAP HANA Cloud by configuring **Athena** as a remote source using the Smart Data Access – **Athena** adapter. The **Athena** Federated Query connection can also be used to read data from a stand-alone SAP HANA Cloud environment.

5. Data federation from **Amazon Redshift** into SAP Datasphere is possible with SAP HANA Smart Data Integration (SDI) or the SAP Data Provisioning Agent. Install and configure this agent to federate **Amazon Redshift** data into SAP Datasphere. **Amazon Redshift** data can also be federated through the **Athena** Federated Query data source connector.

6. Your users can access the storyboards in SAP Analytics Cloud using SAP and non-SAP data from SAP Datasphere. Similarly, you can use **Amazon Q in QuickSight** to visualize SAP and non-SAP data using data federation.

Reviewed for technical accuracy August 28, 2024

AWS Reference Architecture