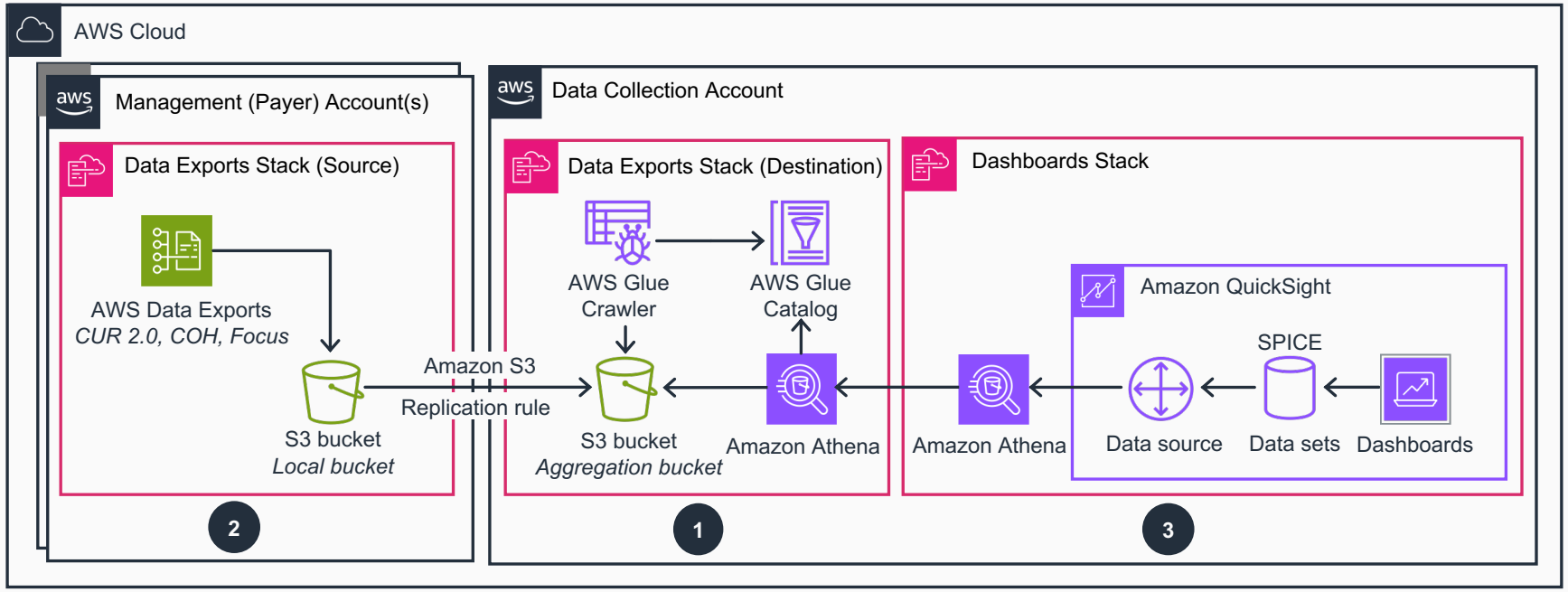
Cloud Intelligence Dashboards on AWS

Foundational dashboards: deployment

This architecture diagram shows how to set up the foundation for cloud observability with Cloud Intelligence Dashboards.



1. Deploy the **AWS CloudFormation** stack for **AWS Data Exports** to the Data Collection AWS account.
2. Deploy the AWS Data Exports **CloudFormation** stack to the Management (Payer) AWS accounts.
3. Deploy the Cloud Intelligence Dashboards **CloudFormation** stack to the Data Collection AWS account.

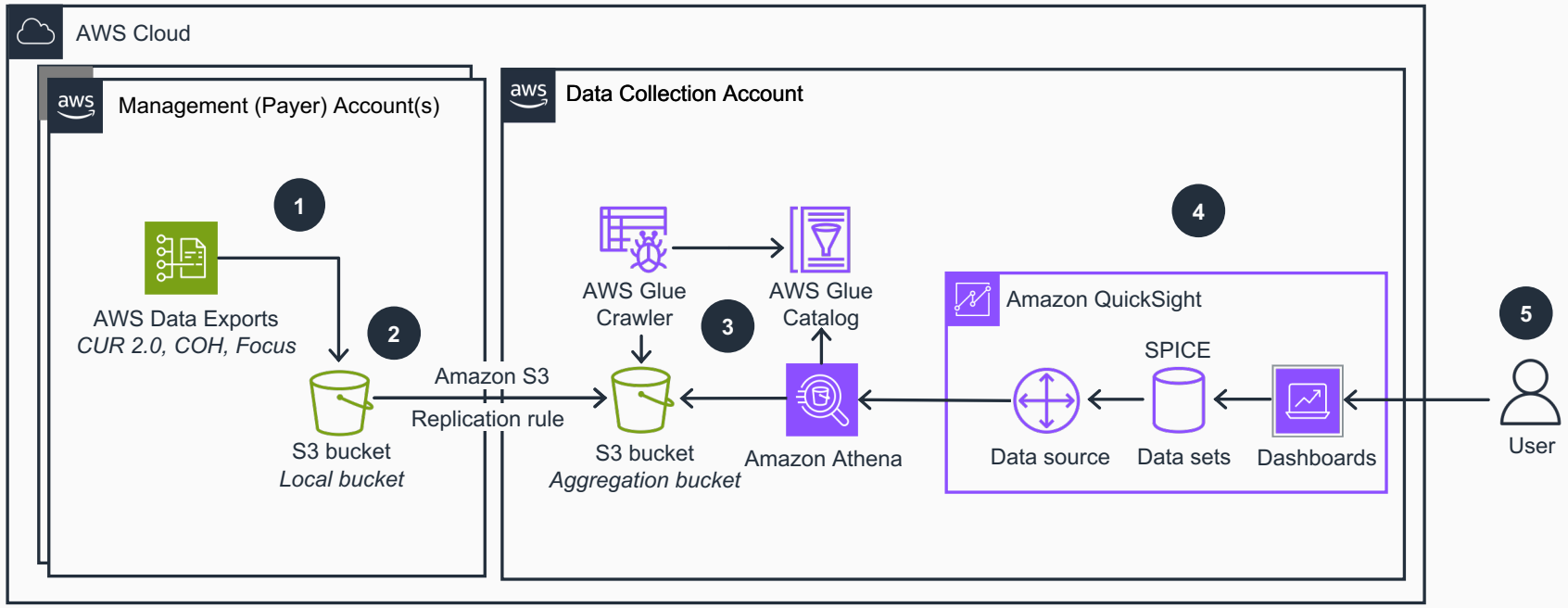
Reviewed for technical accuracy April 14, 2025

AWS Reference Architecture

Cloud Intelligence Dashboards on AWS

Foundational dashboards: architecture

This architecture diagram shows the connection flow for foundational Cloud Intelligence Dashboards.



1. **AWS Data Exports** delivers the **AWS Cost & Usage Report** (AWS CUR)—specifically CUR 2.0—daily to an **Amazon Simple Storage Service (Amazon S3)** bucket in the Management (Payer) Account.
2. An **Amazon S3** replication rule copies export data from the **S3** bucket in a Management (Payer) Account to the **S3** bucket in the dedicated Data Collection Account automatically.
3. **Amazon Athena** allows querying data directly from the aggregated **S3** bucket using an **AWS Glue** table schema definition.
4. **Amazon QuickSight** creates datasets from **Athena**, refreshes daily, and caches them in SPICE (Super-fast, Parallel, In-memory Calculation Engine) for **QuickSight**.
5. User teams (such as executives, FinOps, and engineers) can access Cloud Intelligence Dashboards in **QuickSight**. Access is secured through **AWS Identity and Access Management (IAM)**, **AWS IAM Identity Center**, and optional row-level security.

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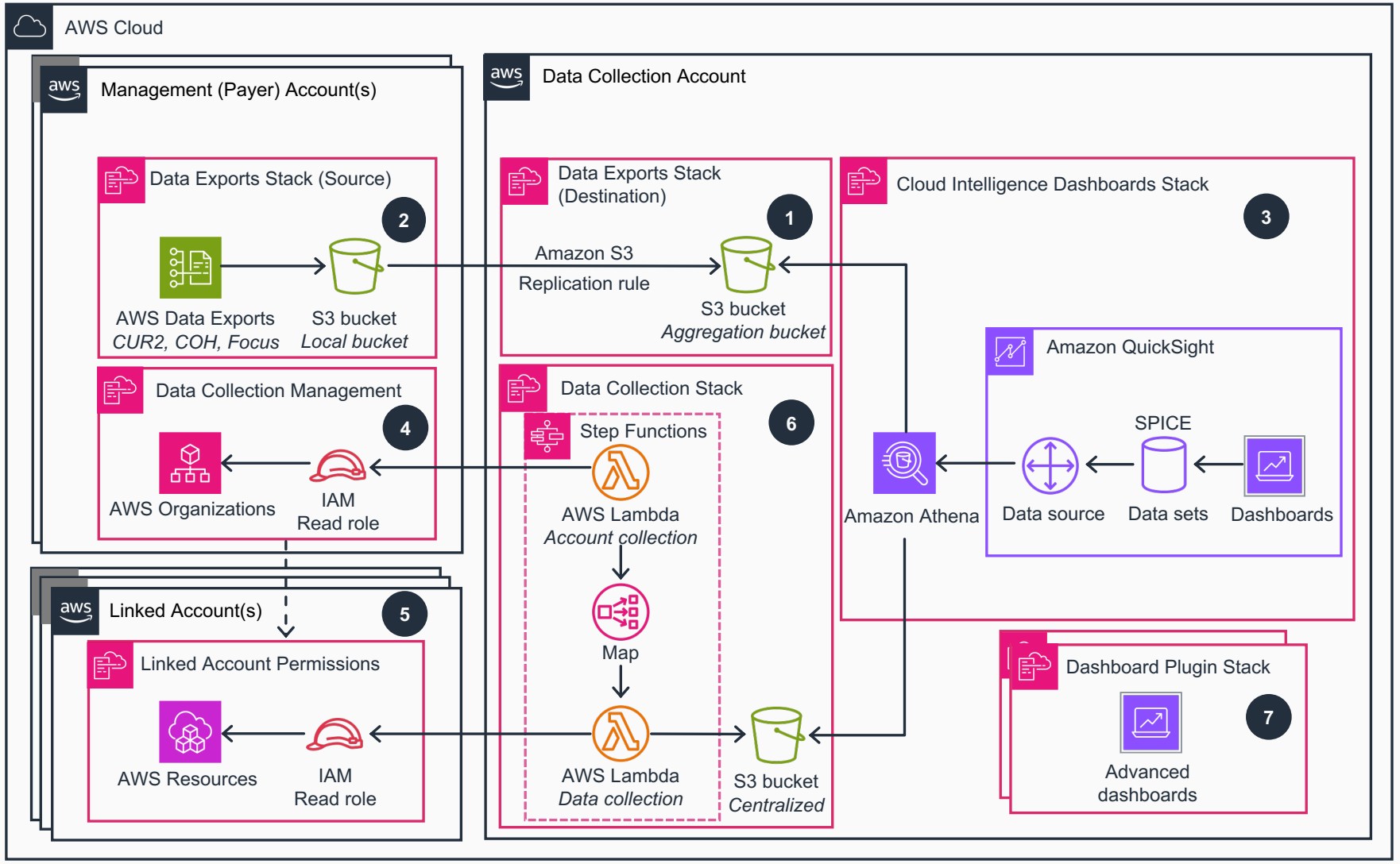
AWS Reference Architecture

Cloud Intelligence Dashboards on AWS

Advanced dashboards: deployment

This architecture diagram shows the setup for the foundational and advanced Cloud Intelligence Dashboards.



1. Deploy the **CloudFormation** stack for **AWS Data Exports** to the Data Collection AWS account.
2. Deploy the AWS Data Exports **CloudFormation** stack to the Management (Payer) AWS account(s).
3. Deploy the Cloud Intelligence Dashboards **CloudFormation** stack to the Data Collection AWS account.
4. Deploy the Advanced Data Collection Permissions **CloudFormation** stack to the Management (Payer) AWS account(s).
5. The Permissions **CloudFormation** stack in the Management (Payer) Account also deploys Permissions stacks to each of Linked accounts using StackSets.
6. Deploy the Data Collection Stack to the Data Collection AWS account.
7. Deploy the Advanced Dashboards using the Dashboard Plugin **CloudFormation** stack to the Data Collection AWS Account.

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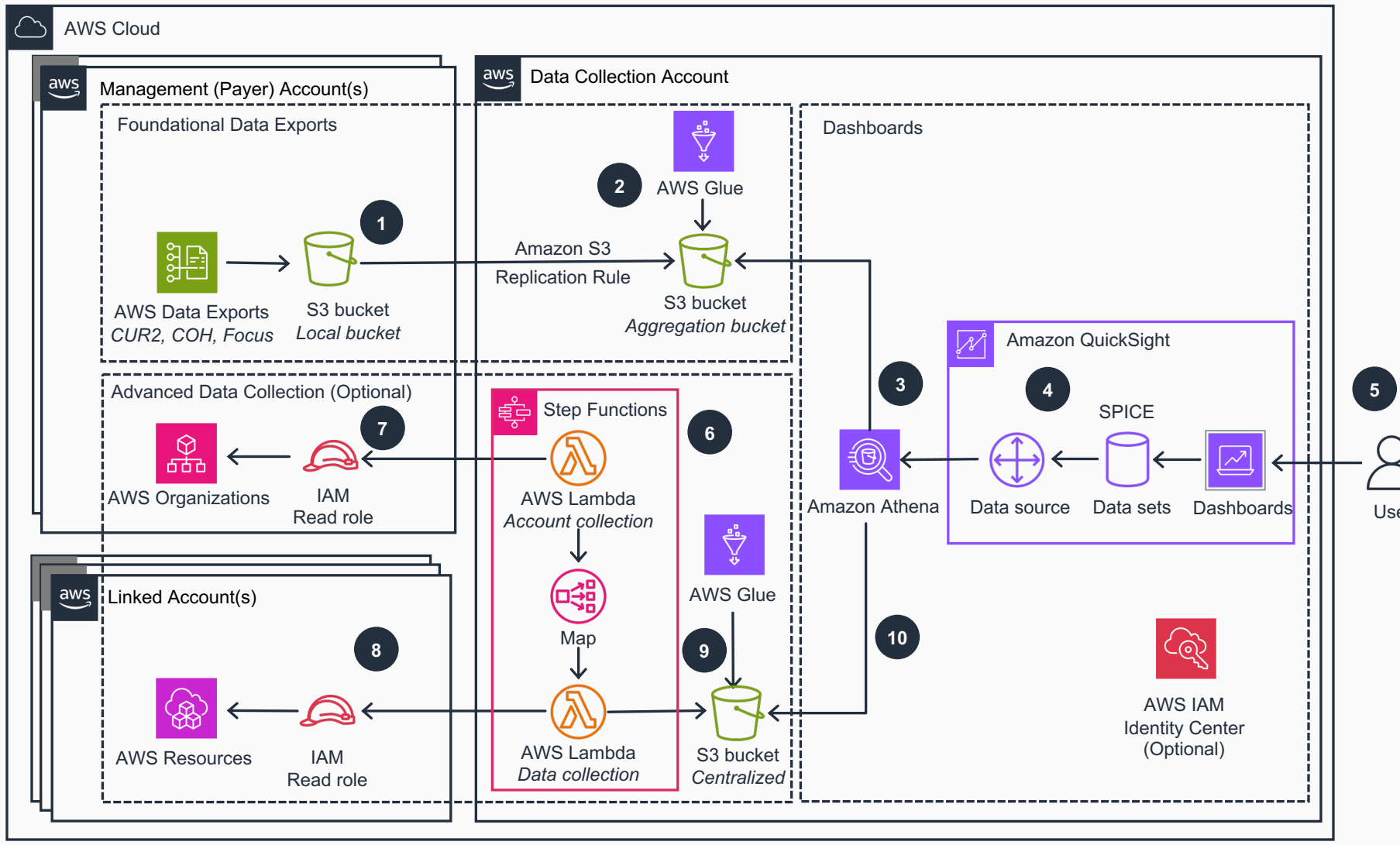
AWS Reference Architecture

Cloud Intelligence Dashboards on AWS

Advanced dashboards: architecture

This architecture diagram shows the connection flow for the foundational and advanced Cloud Intelligence Dashboards.



1. **AWS Data Exports** delivers **AWS CUR** reports daily to the **S3** bucket in the Management (Payer) Account.
2. An **Amazon S3** replication rule copies Export data from the **S3** bucket in a Management (Payer) Account to the **S3** bucket in the dedicated Data Collection Account automatically.
3. **Athena** allows querying data directly from the **S3** bucket using an **AWS Glue** table schema definition.
4. **QuickSight** creates datasets from **Athena**, refreshes daily, and caches them in SPICE for **QuickSight**.
5. User teams (such as executives, FinOps, and engineers) can access Cloud Intelligence Dashboards in **QuickSight**. Access is secured through **IAM**, **IAM Identity Center**, and optional row-level security.
6. Optionally, the advanced data collection can be deployed to enable advanced dashboards based on **AWS Trusted Advisor**, **AWS Health Events**, and other sources. Additional data is retrieved from **AWS Organizations** or Linked Accounts. In this case, an **Amazon EventBridge** rule triggers **AWS Step Functions** for data collection modules on a configurable schedule.
7. The *Account Collector* **AWS Lambda** function in **Step Functions** retrieves linked account details using an **Organizations** API.
8. The *Data Collection* **Lambda** function in **Step Functions** assumes the role in each linked account to retrieve account-specific data using **AWS SDK**.
9. Retrieved data is stored in a centralized **S3** bucket.
10. Advanced Cloud Intelligence Dashboards leverage **Athena** and **QuickSight** for comprehensive data analysis.

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AWS Reference Architecture