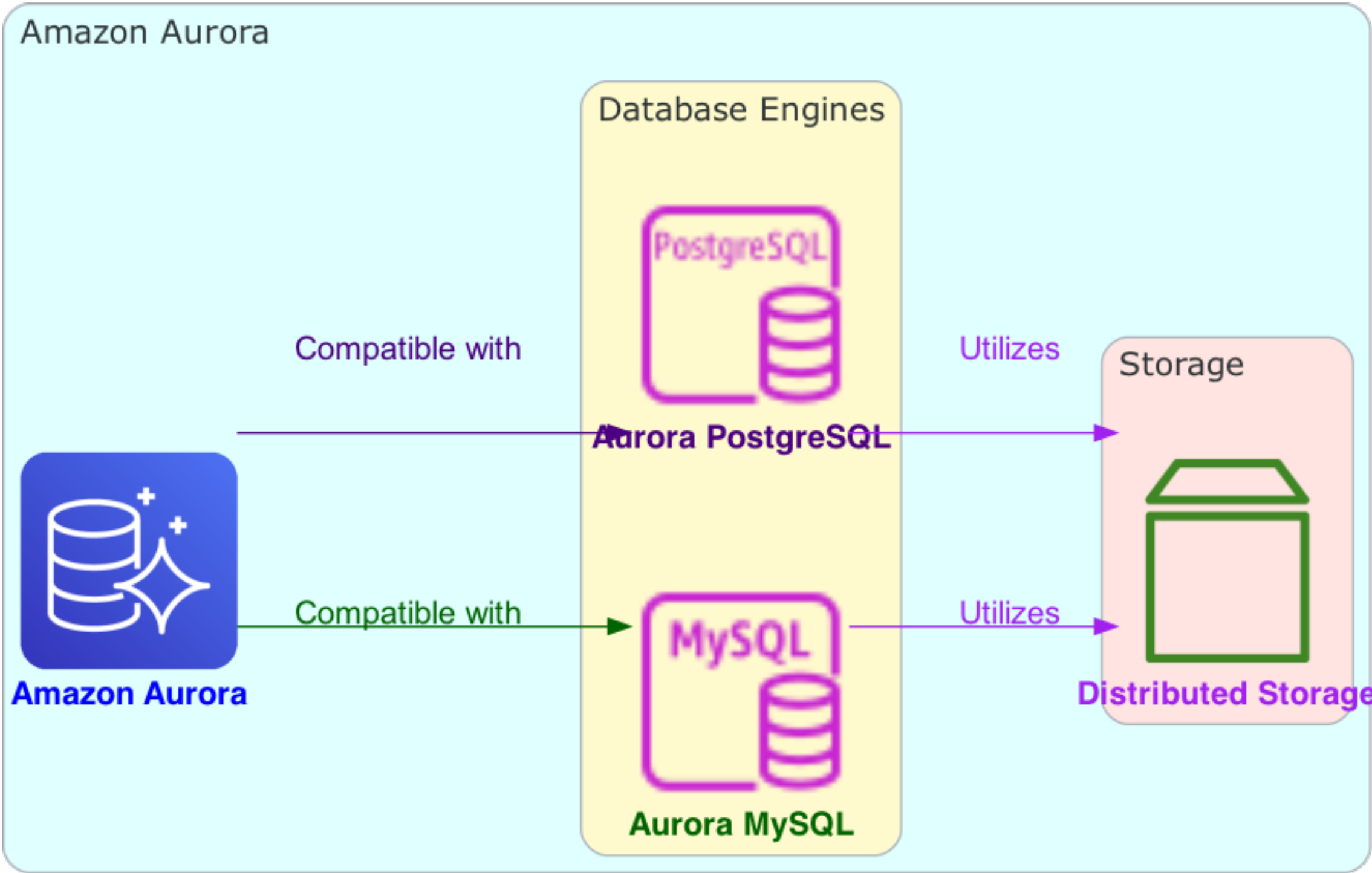




# Amazon Aurora

# What is Amazon Aurora?



- 1. Fully managed relational database engine
- AWS handles database management tasks
- Users focus on applications

- 2. Compatible with MySQL and PostgreSQL
  - MySQL compatibility
  - PostgreSQL compatibility
  - Speed and reliability of open-source
  - Cost-effectiveness of open-source

- High throughput
- 3. compared to MySQL, PostgreSQL
  - 5 Up to 5x throughput of MySQL
  - 3 Up to 3x throughput of PostgreSQL

- 4. Utilizes existing code, tools, and applications
  - Leverage existing MySQL and PostgreSQL assets
  - Minimizes need for extensive modifications

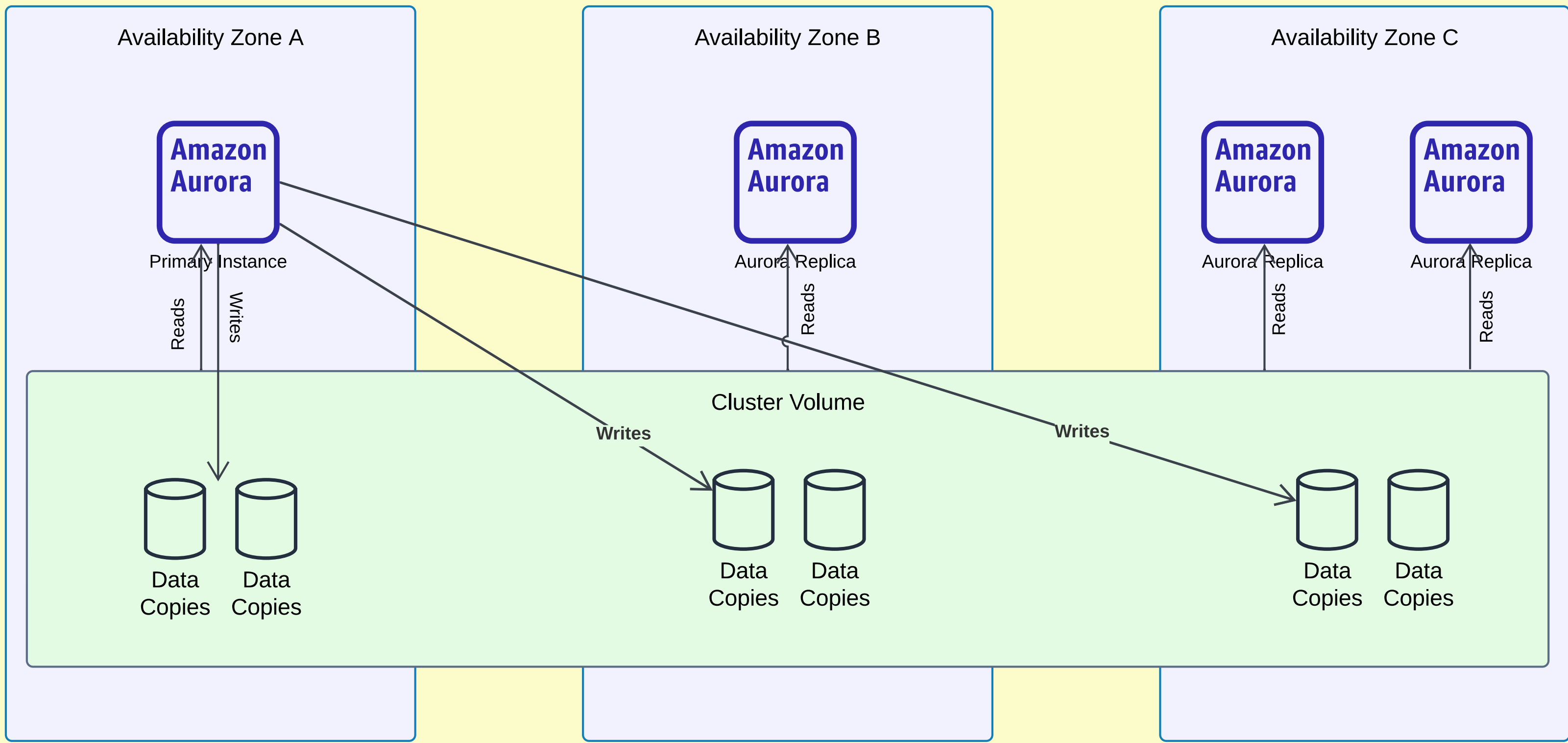
- 5. High-performance storage subsystem
  - Optimized for fast distributed storage

- 6. Automatic storage growth up to 128 TiB
  - Storage automatically grows as needed
  - Maximum capacity of 128 terabytes (TiB)

- 7. Automated database clustering and replication
  - Simplifies complex configuration tasks
  - Automates and standardizes processes

# Amazon Aurora DB Clusters

Amazon Aurora DB Cluster



1. Consists of DB instances & cluster volume

One or more DB instances

Cluster volume manages data

2. Cluster volume spans multiple Availability Zones

Virtual database storage volume

Each AZ has copy of data

7. Specify failover priority for Replicas

Offload read workloads from primary instance

4. Up to 15 Aurora Replicas per cluster

5. High availability with Replicas in separate AZs

6. Automatic failover to Aurora Replica

If primary becomes unavailable

3. Two types of DB instances

Primary DB instance

Supports read & write

Performs data modifications

One per DB cluster

Aurora Replica

Read-only

Connects to same storage volume

# Aurora Features

1. Blue/Green Deployments

2. Aurora cluster storage configurations

3. Database activity streams in Aurora

4. Exporting cluster data to Amazon S3

5. Exporting snapshot data to Amazon S3

6. Aurora global databases

7. IAM database authentication in Aurora

8. Kerberos authentication with Aurora

9. Aurora machine learning

10. Performance Insights with Aurora

11. Zero-ETL integrations with Amazon Redshift

12. Amazon RDS Proxy

13. Secrets Manager integration

14. Aurora Serverless v2

15. RDS Data API

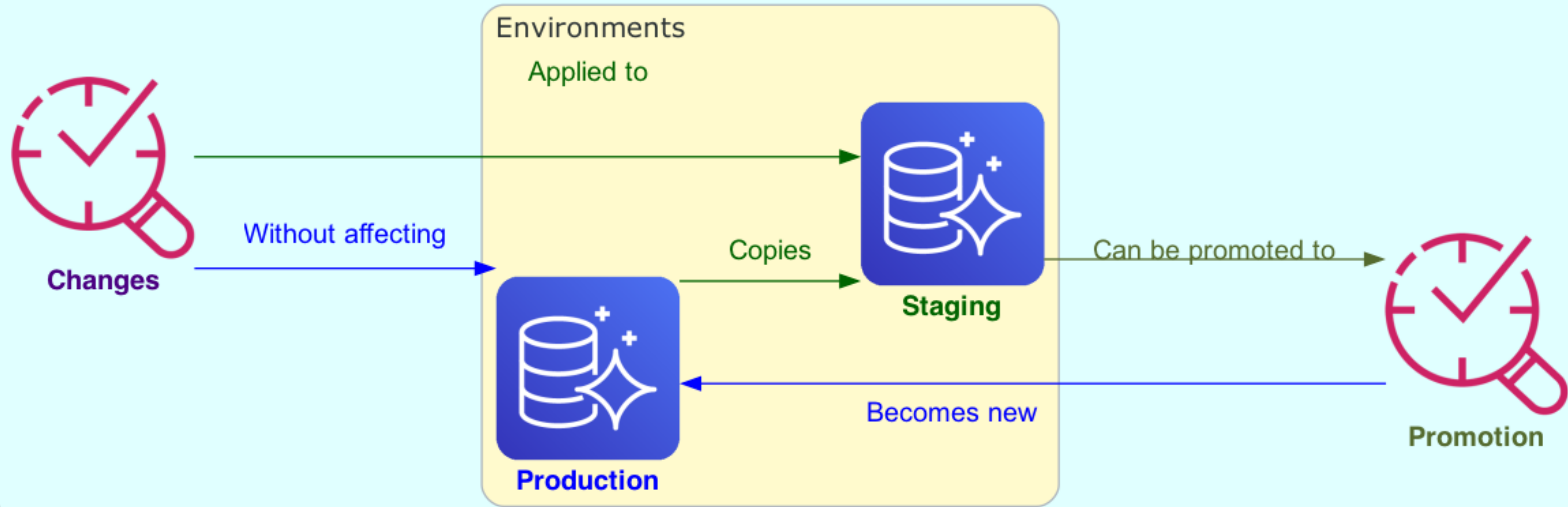
16. Zero-downtime patching (ZDP)

17. Engine-native features



# Blue/Green Deployments

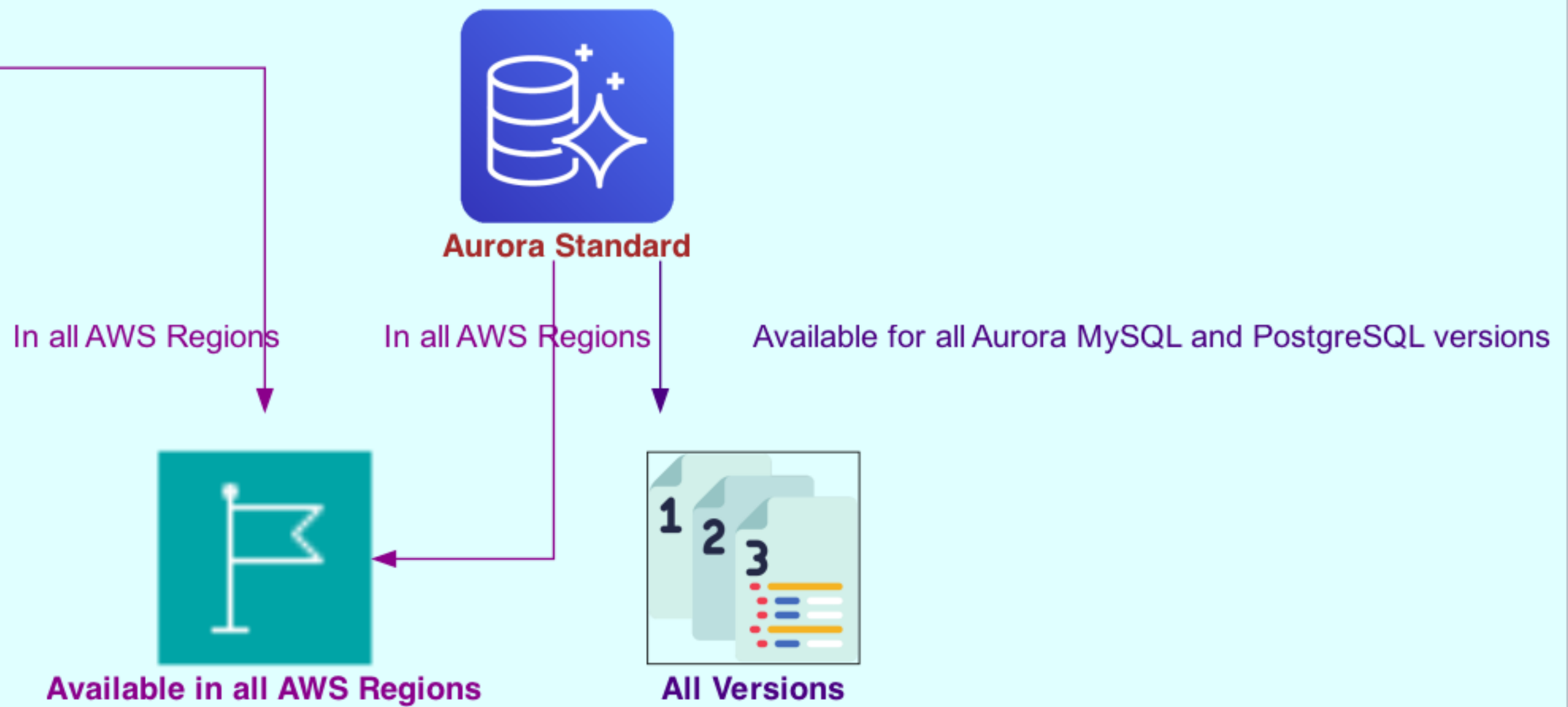
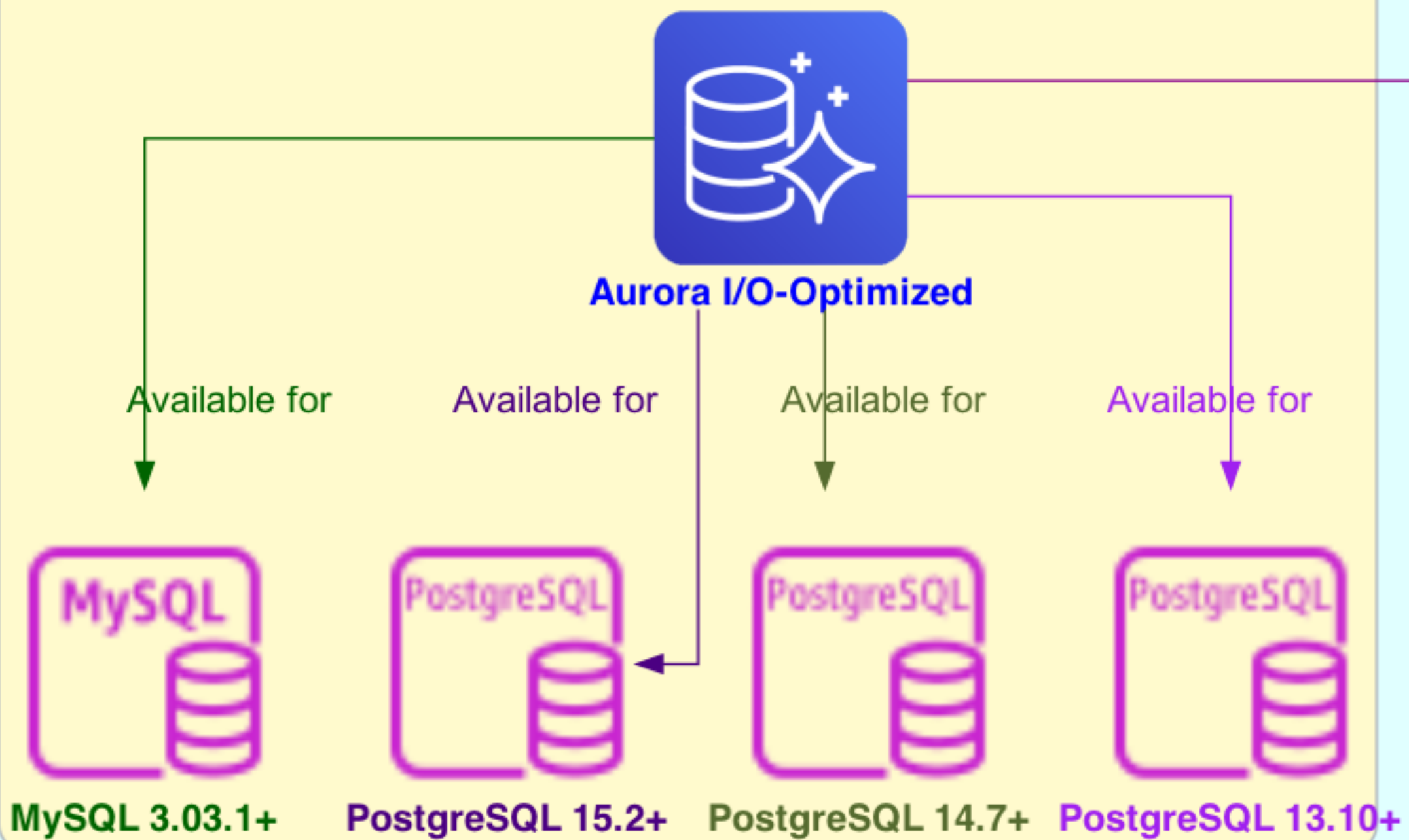
Amazon RDS Blue/Green Deployments



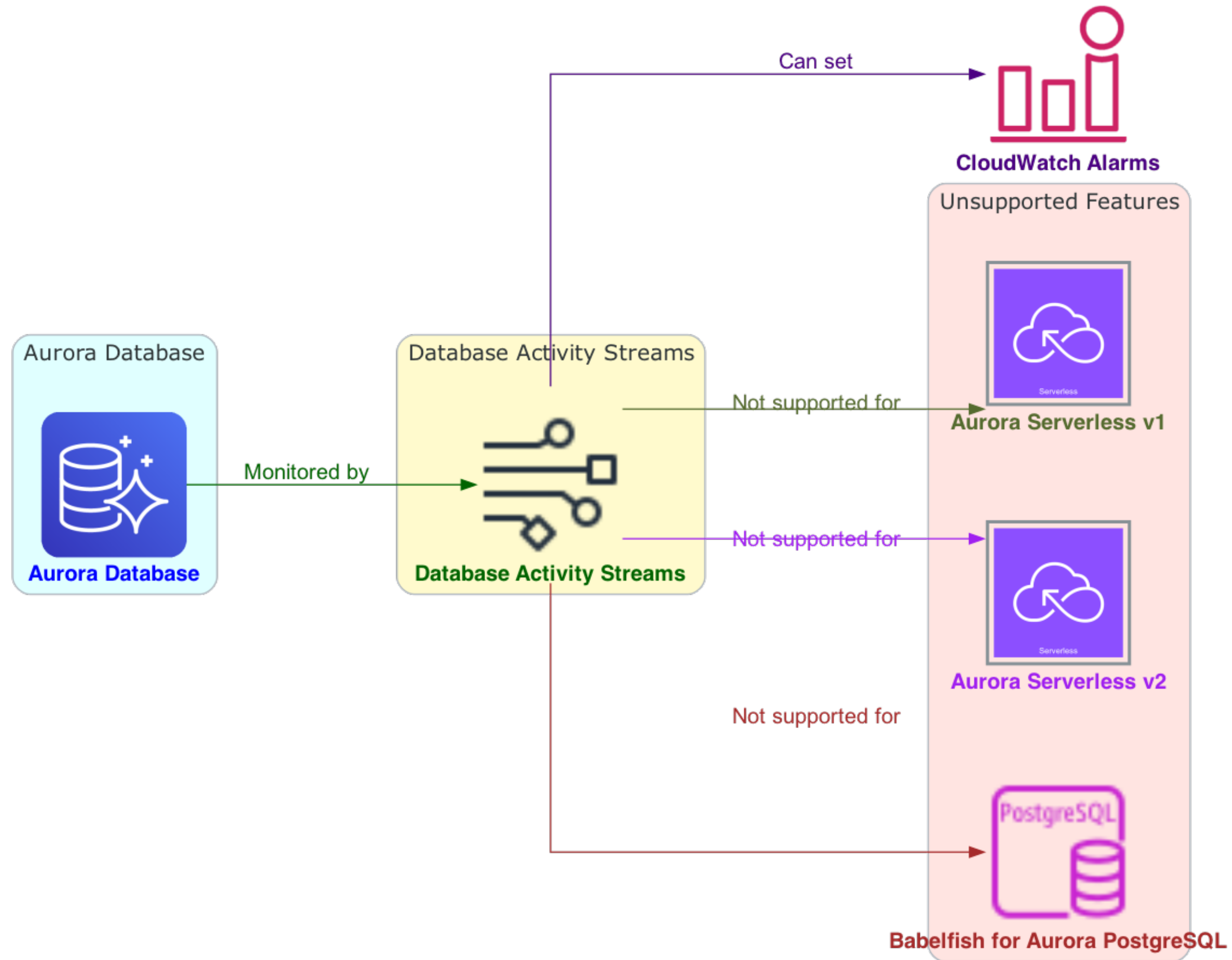
# Aurora cluster storage configurations

## Aurora Cluster Storage Configurations

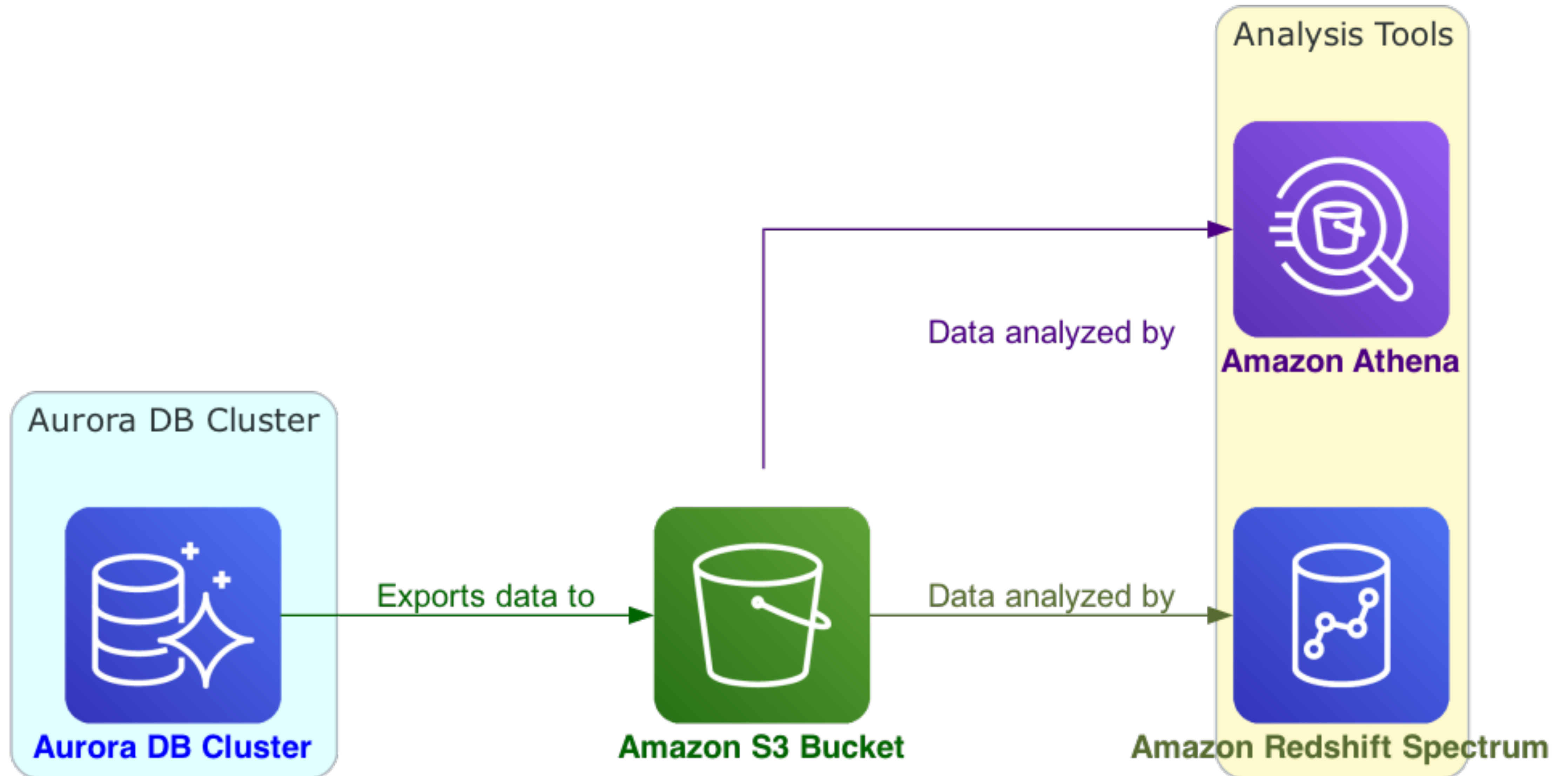
### Aurora I/O-Optimized



# Database activity streams in Aurora

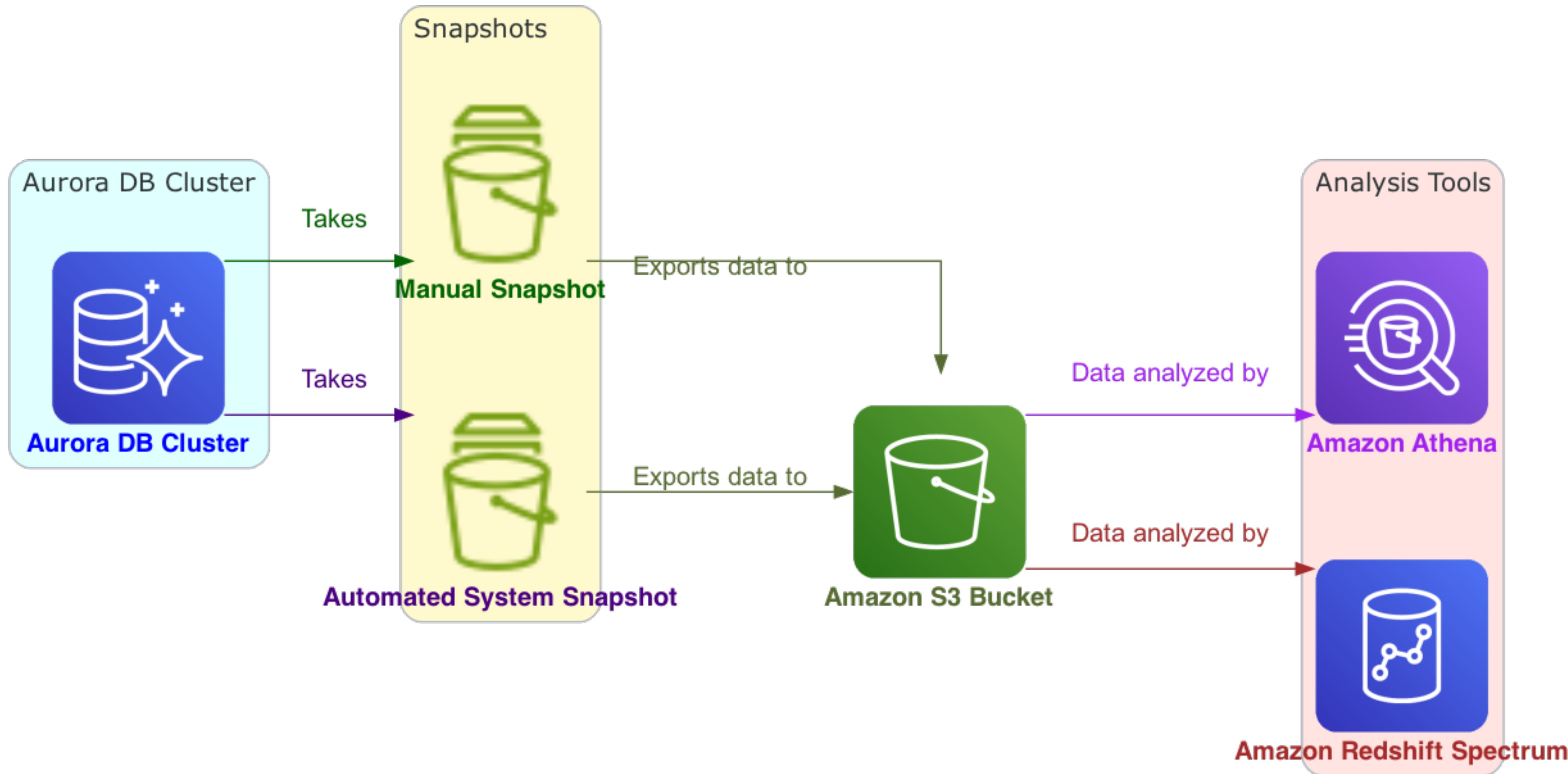


# Exporting cluster data to Amazon S3

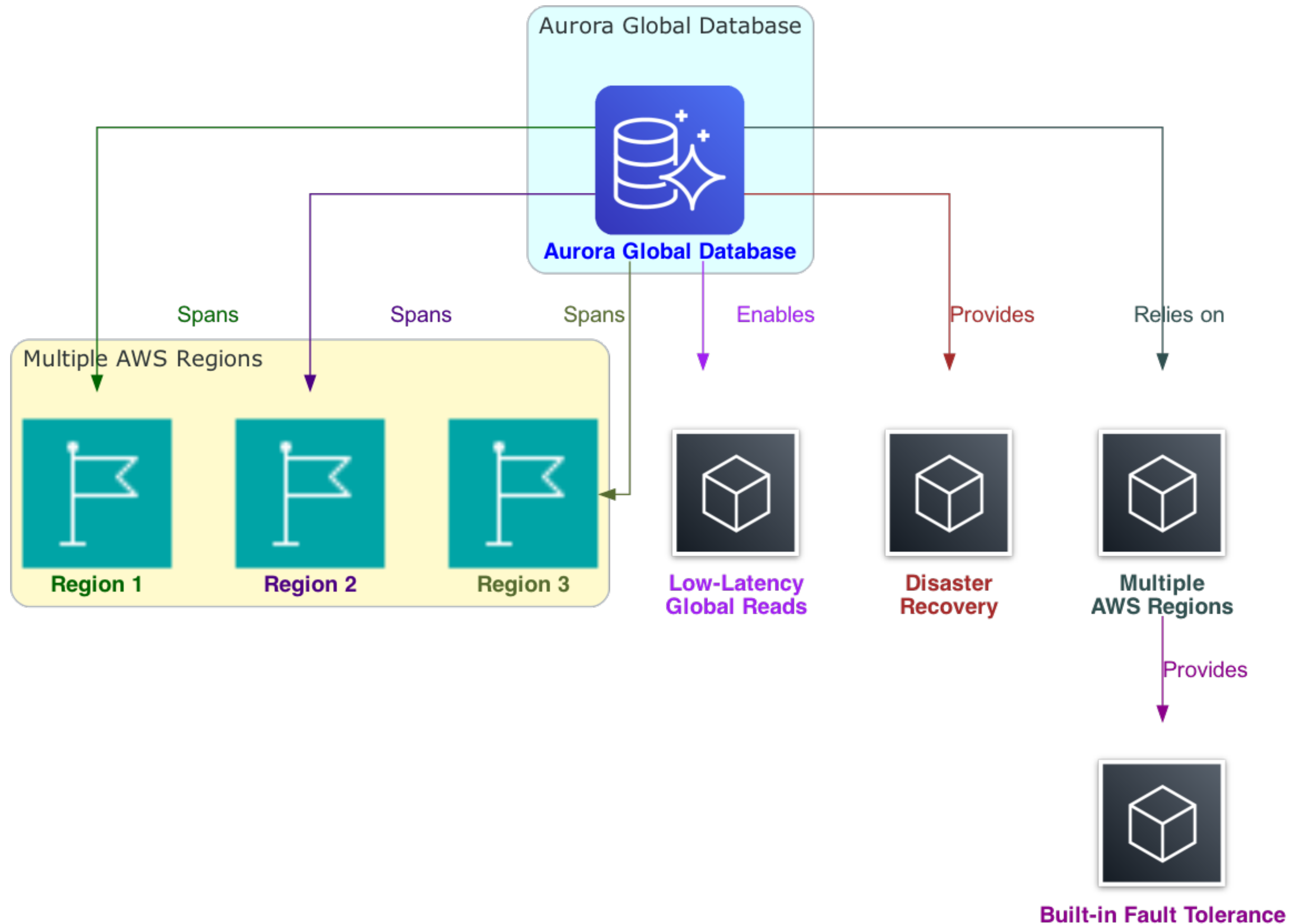




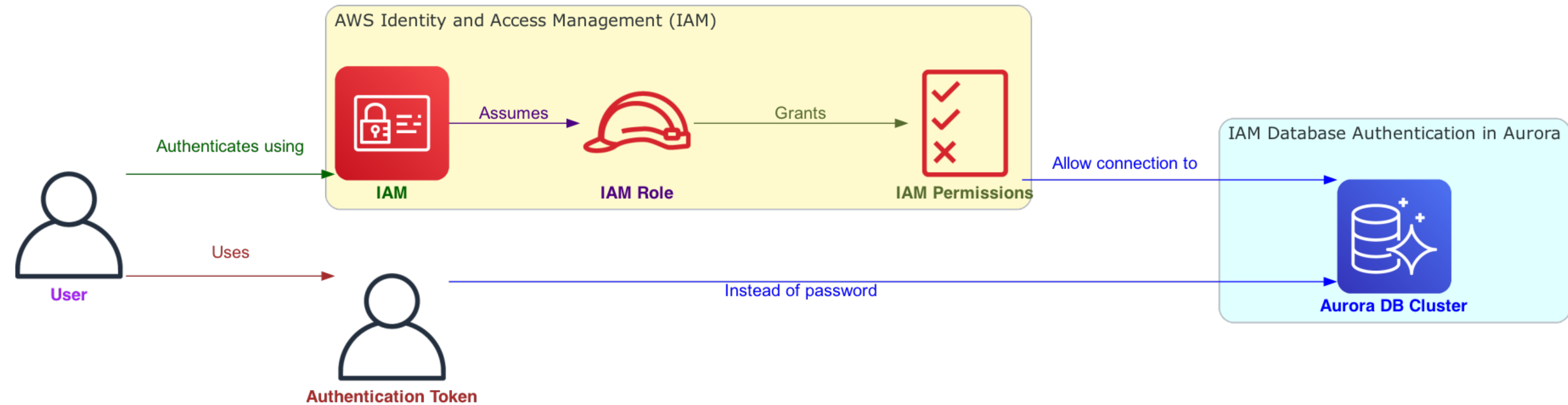
# Exporting snapshot data to Amazon S3



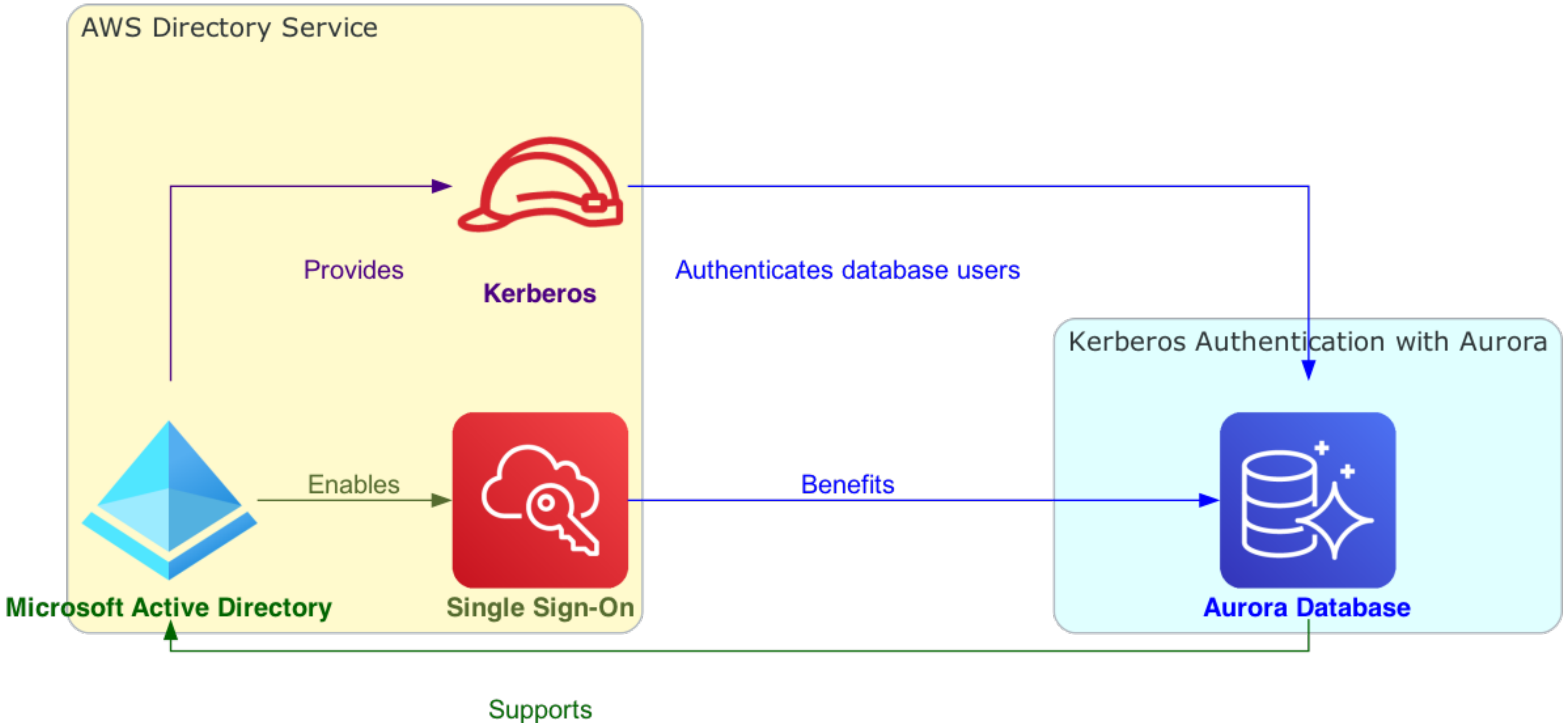
# Aurora global databases



# IAM database authentication in Aurora

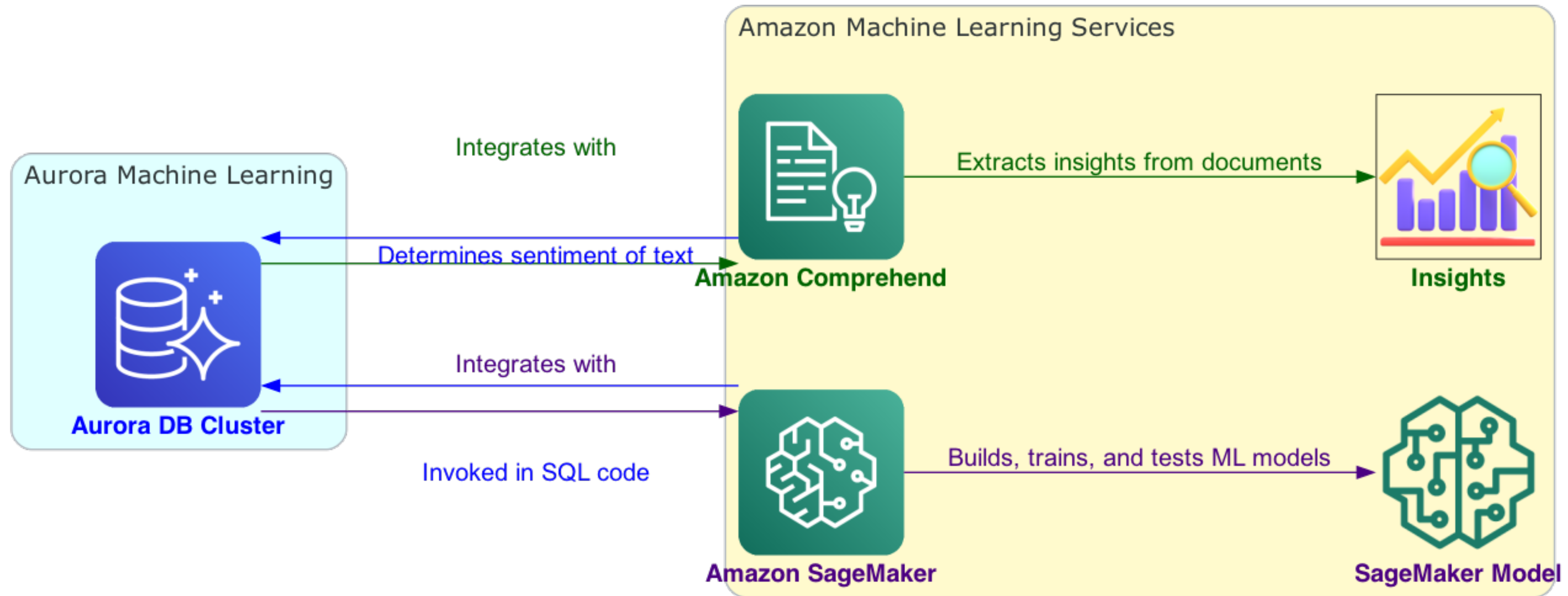


# Kerberos authentication with Aurora

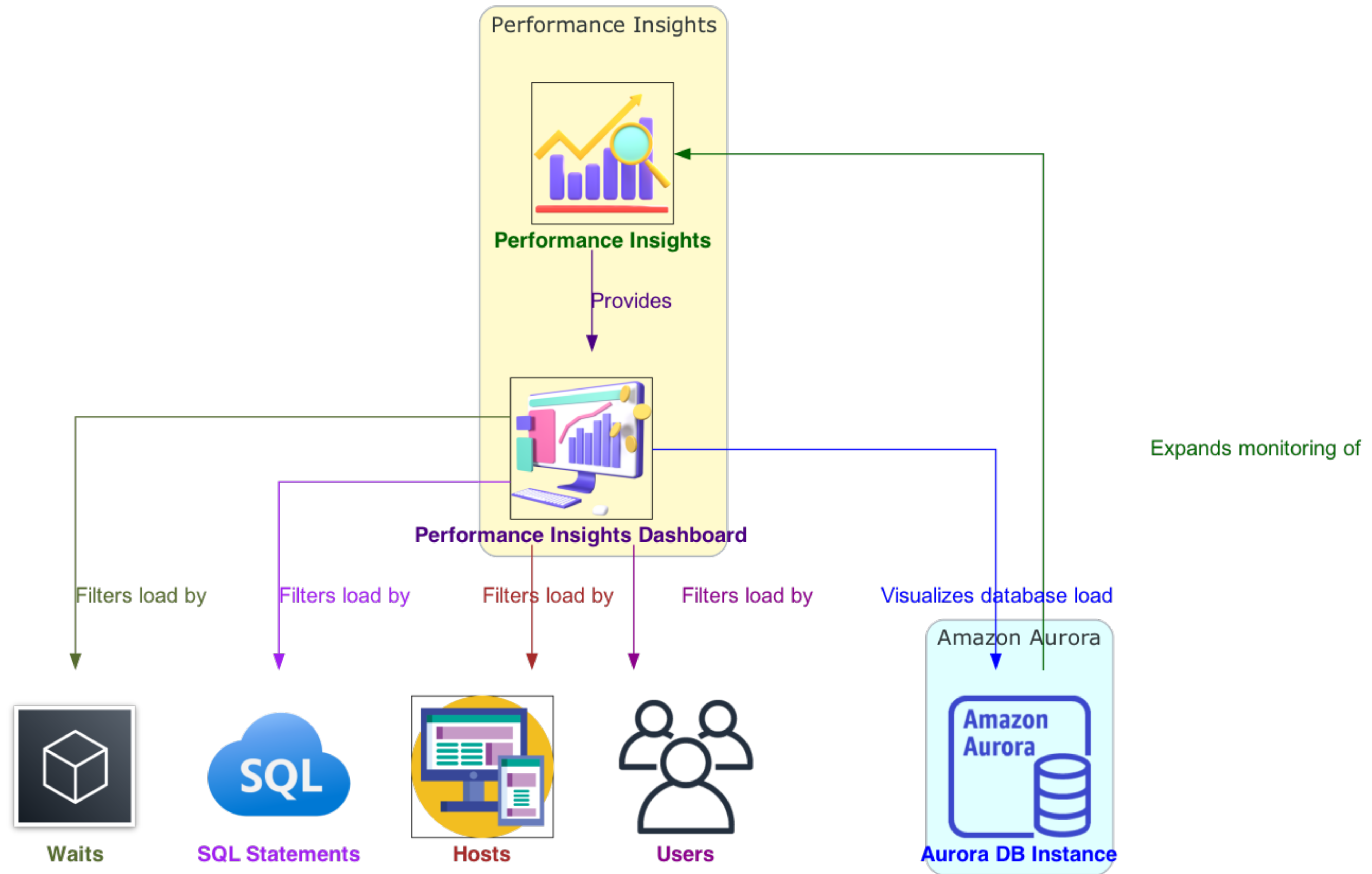




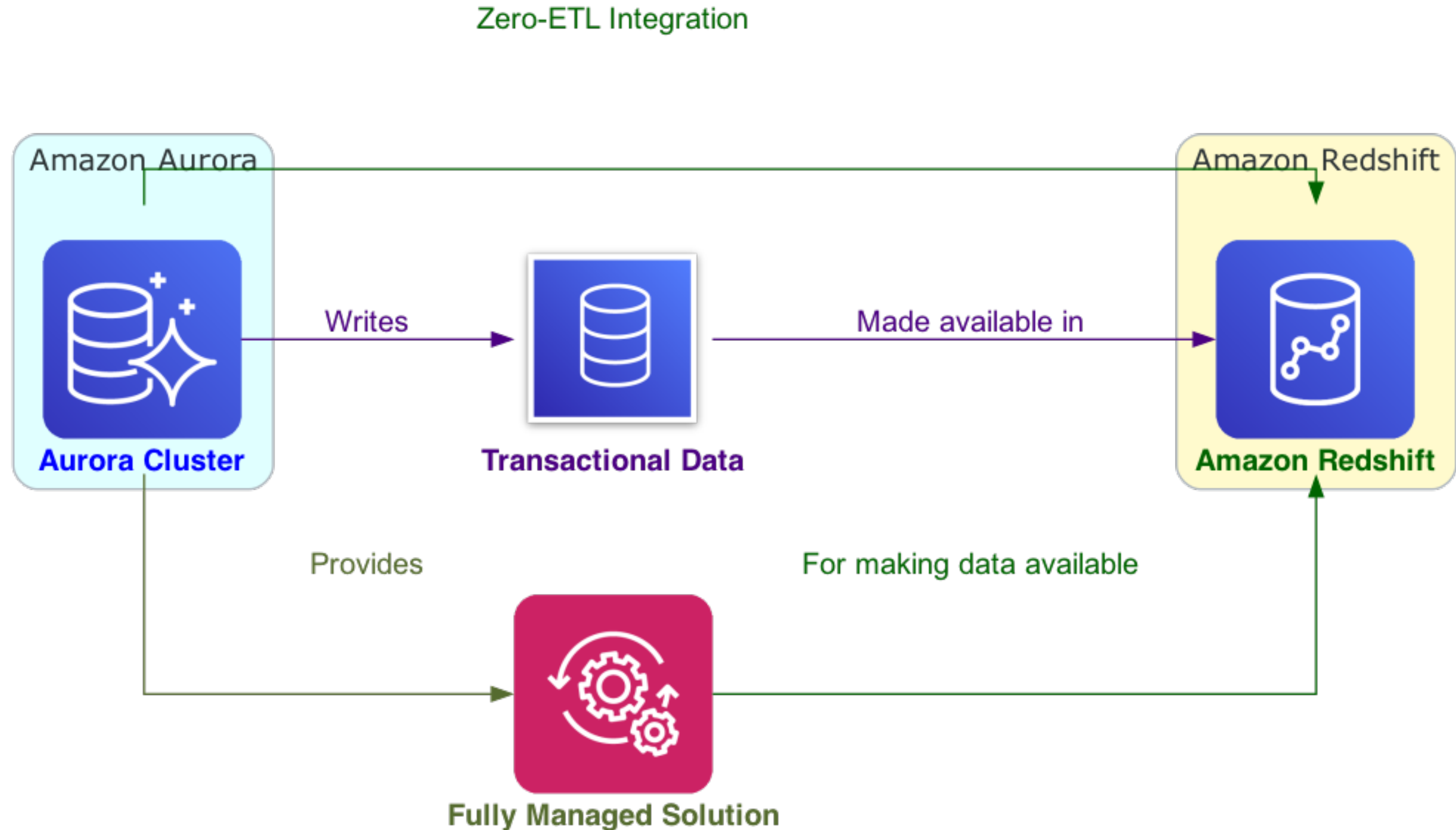
# Aurora machine learning



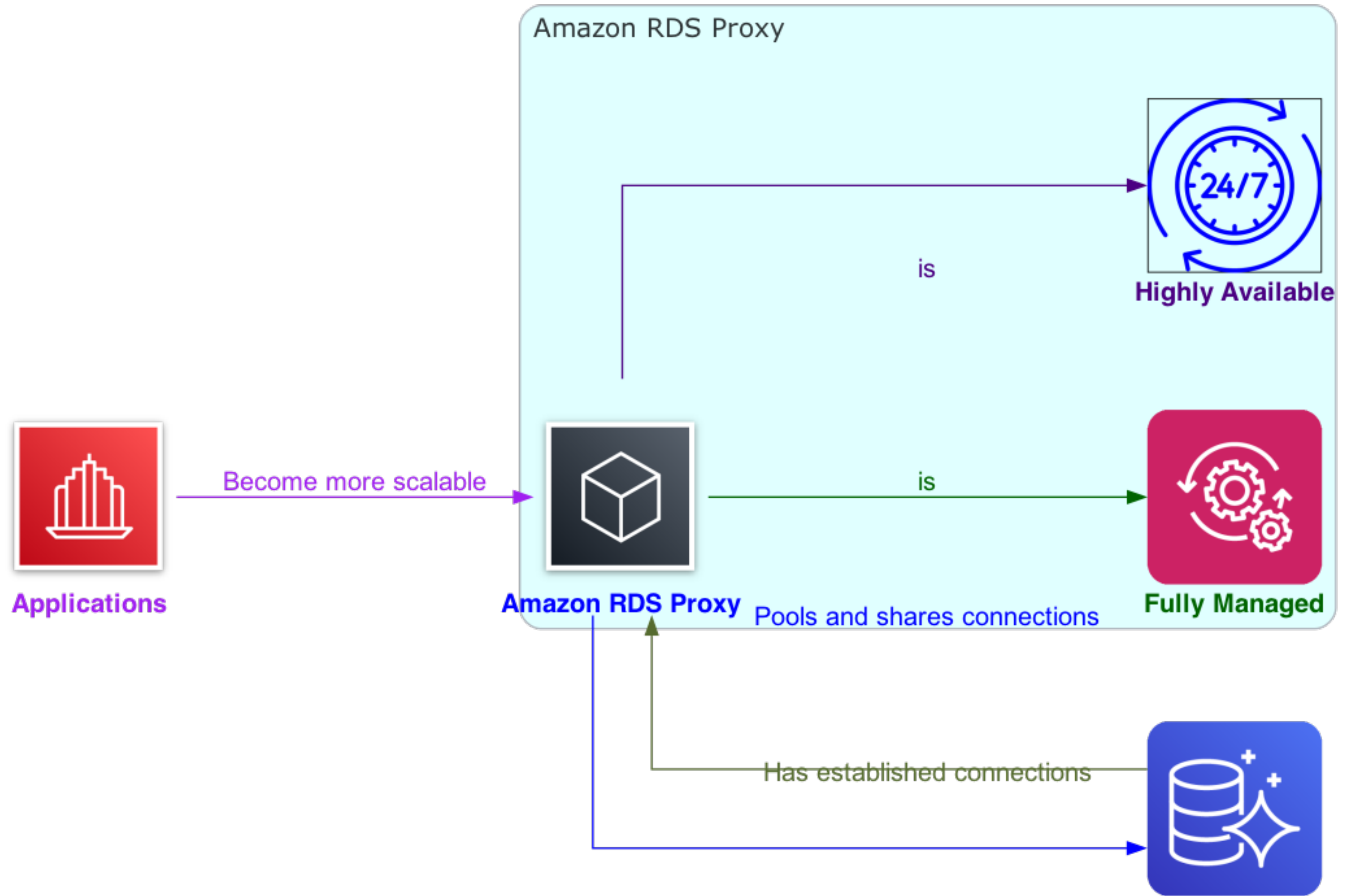
# Performance Insights with Aurora



# Zero-ETL integrations with Amazon Redshift

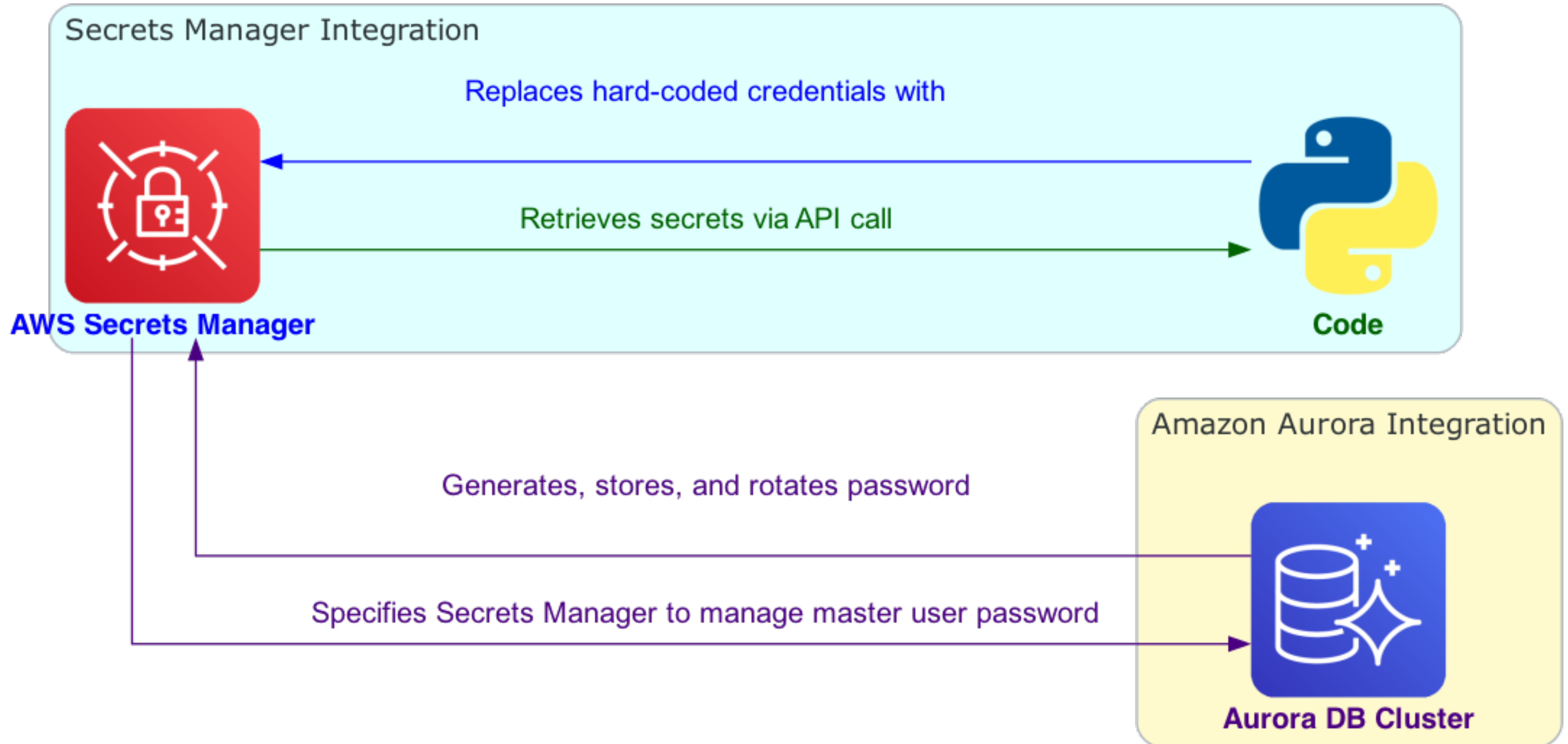


# Amazon RDS Proxy

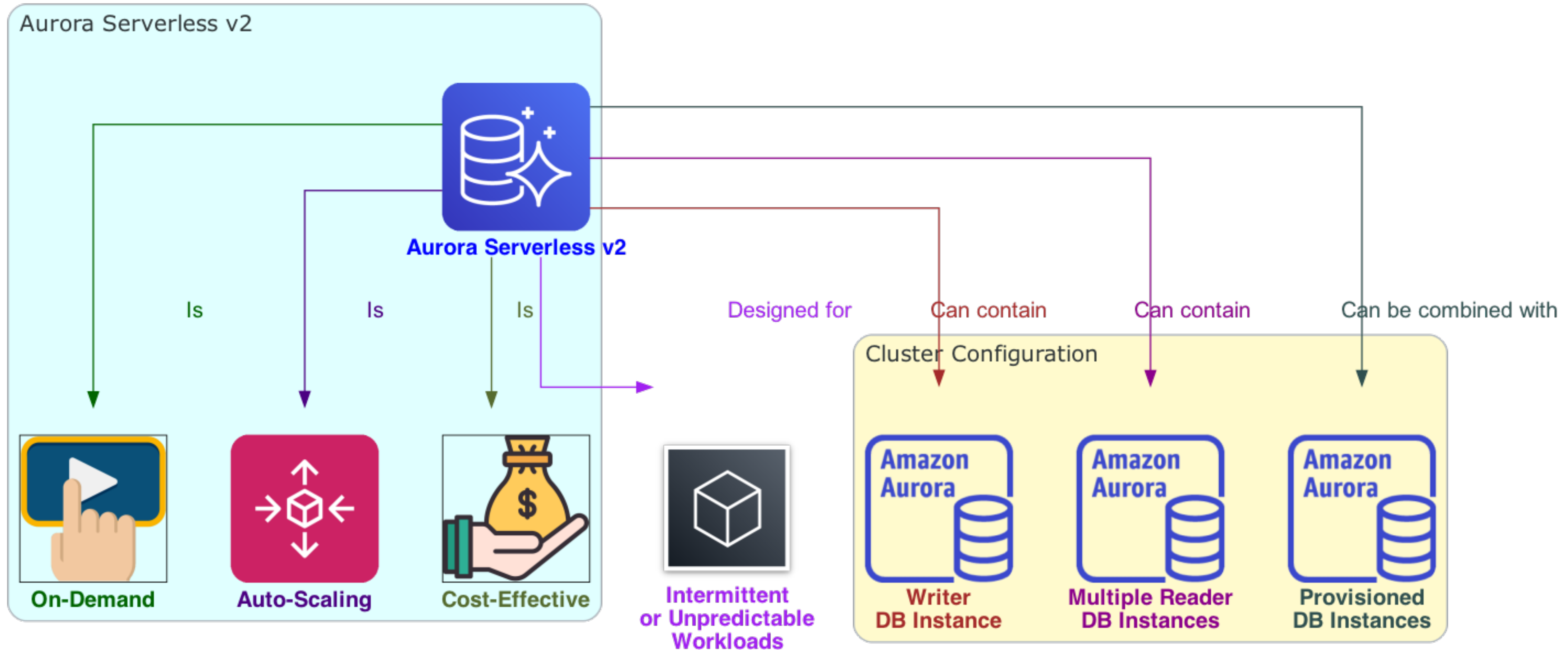




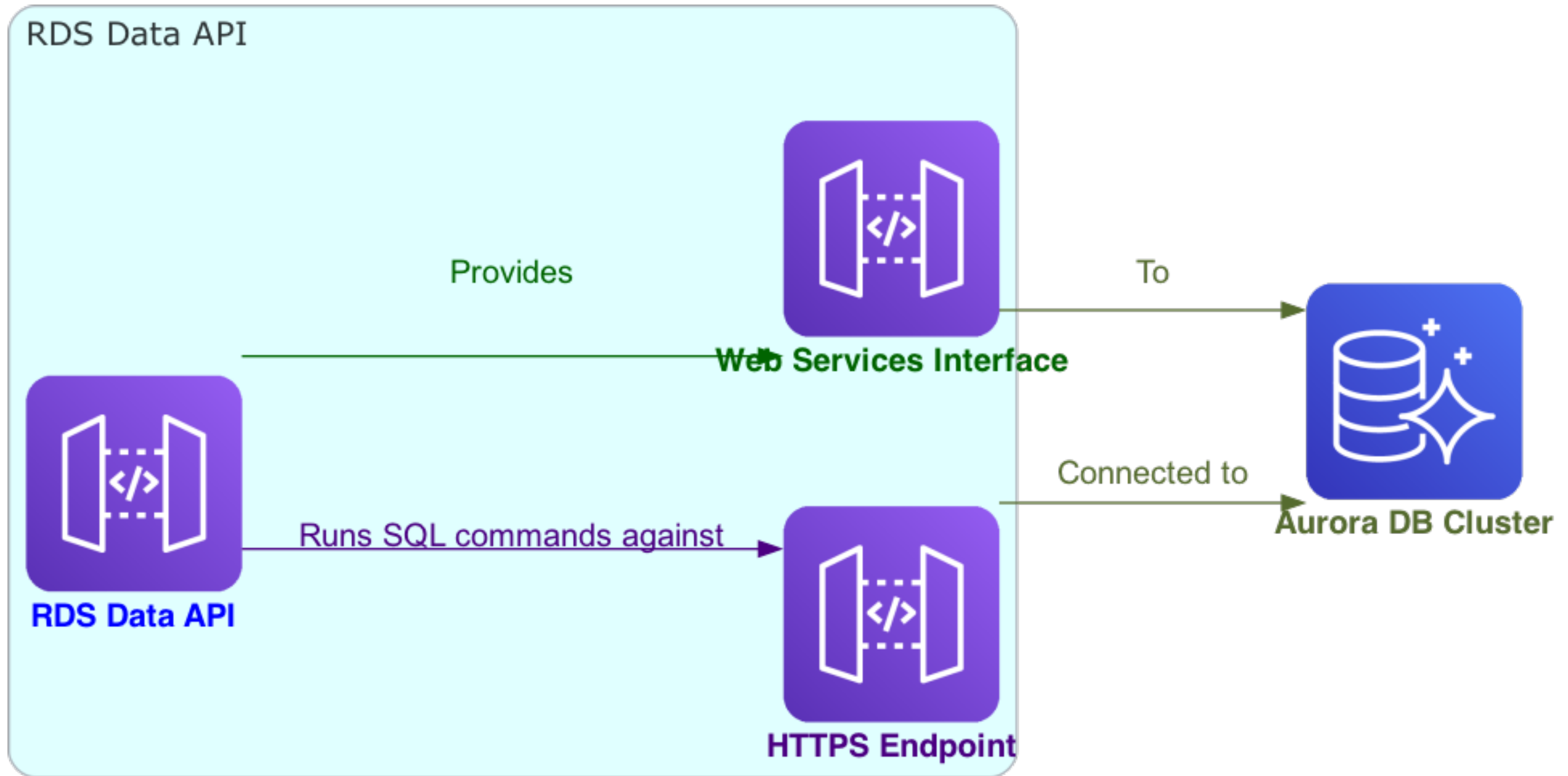
# Secrets Manager integration



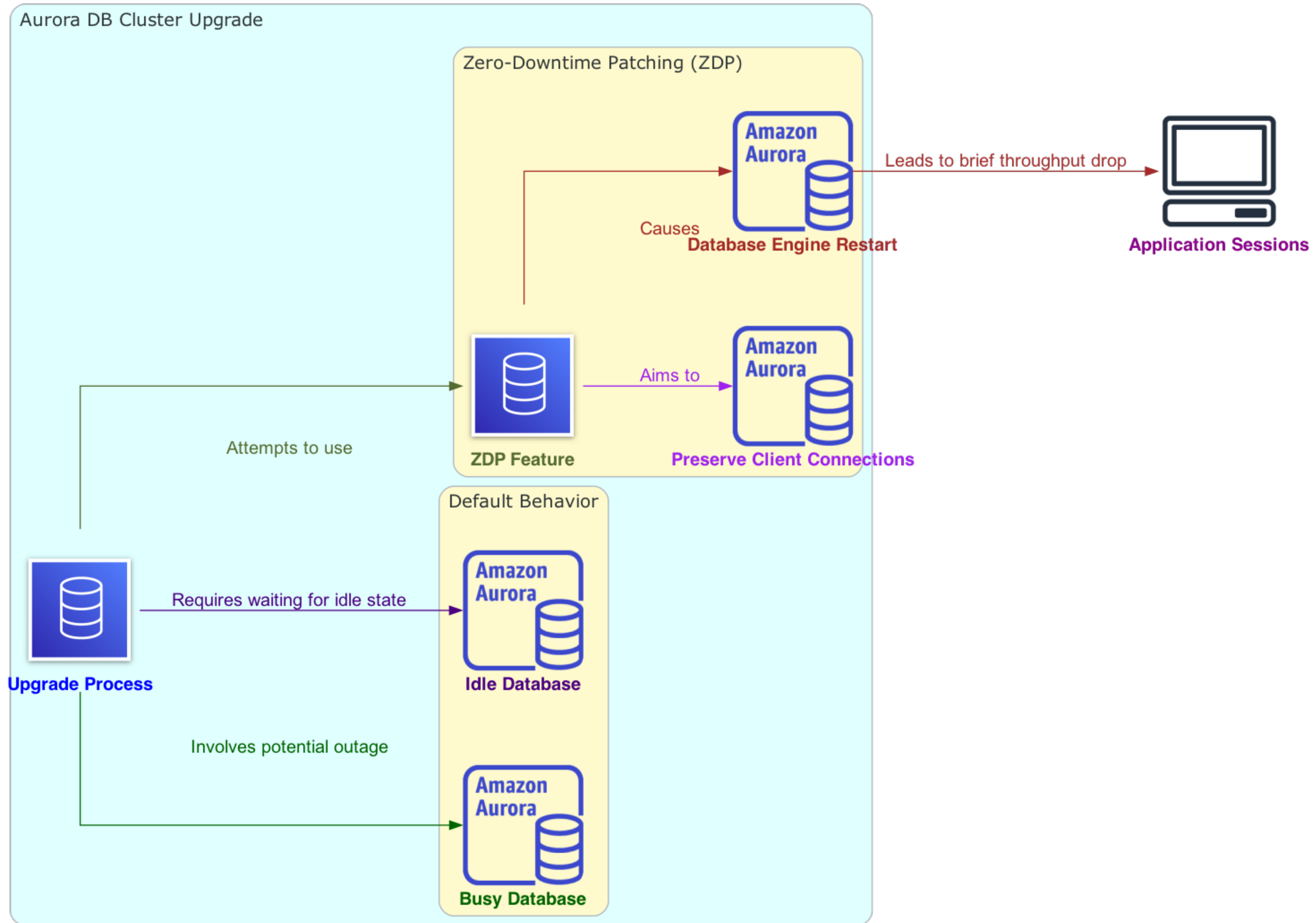
# Aurora Serverless v2



# RDS Data API



# Zero-downtime patching (ZDP)







**Thanks  
for  
Watching**