

Object Notification Service

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Agenda

- Event Notification in AWS S3
- Object Notification Service
- What is MDS? How it enables 2-site replication
- Limitations of MDS
- MDS-fanout and Object Notification Service Architecture
- Q & A

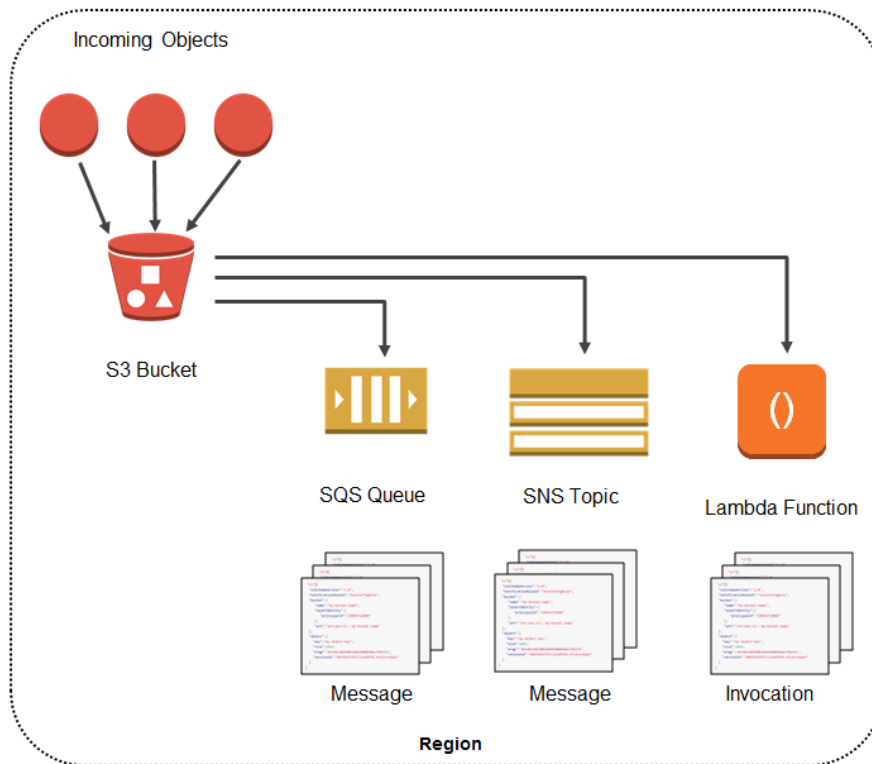
Event Notifications in AWS S3

- Push notifications when certain S3 actions happen in a bucket

Introduced by AWS in 2014.

<https://docs.aws.amazon.com/AmazonS3/latest/dev/NotificationHowTo.html>

<https://aws.amazon.com/blogs/aws/s3-event-notification/>

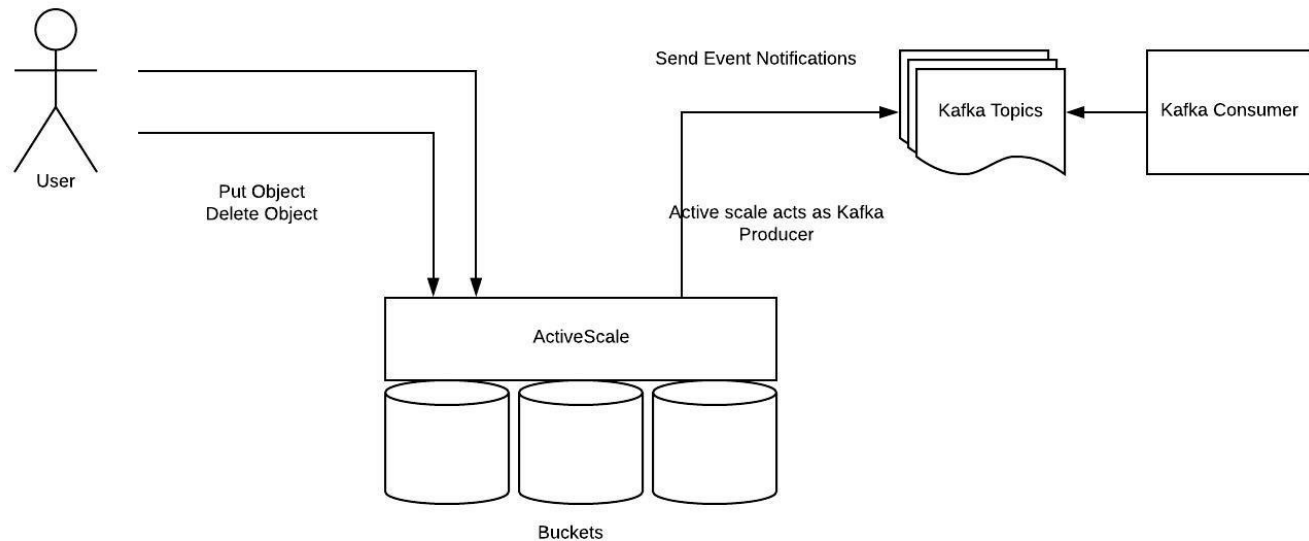


Event Notifications in AWS S3

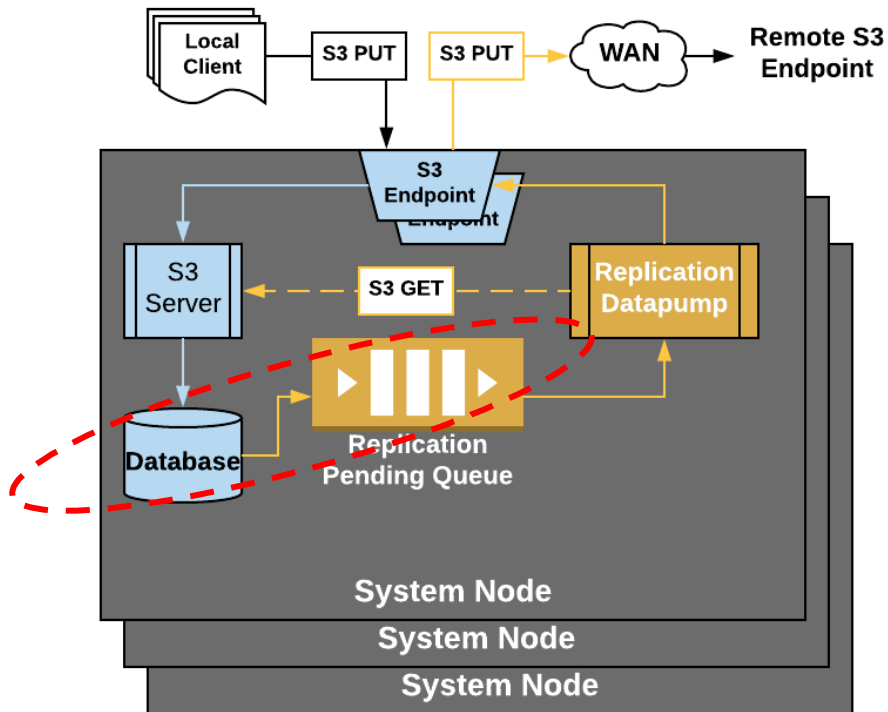
- Configured at bucket level
 - PUT Bucket notification
(<https://docs.aws.amazon.com/AmazonS3/latest/API/RESTBucketPUTnotif>)
 - GET Bucket notification
(<https://docs.aws.amazon.com/AmazonS3/latest/API/RESTBucketGETnotif>)
 - Account Owner operation, similar to PUT Bucket Replication
- AWS S3 Notifications supported
 - A new object created event
 - An object removal event
 - A Reduced Redundancy Storage (RRS) object lost event
- AWS Notification targets supported
 - AWS SNS
 - AWS SQS
 - AWS Lambda

Event Notifications in Active Scale

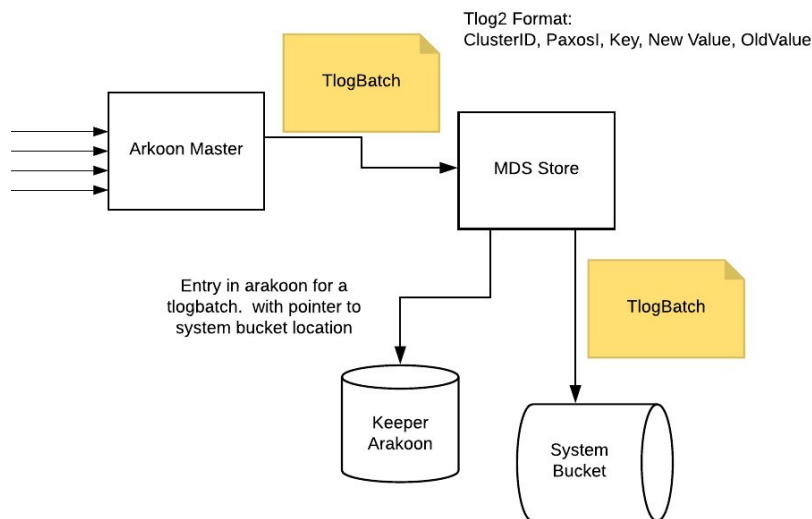
- Feature is named Object Notification Service
- <https://jira.wdc.com/browse/DCSR-523>
- Notification Target is External Kafka Cluster



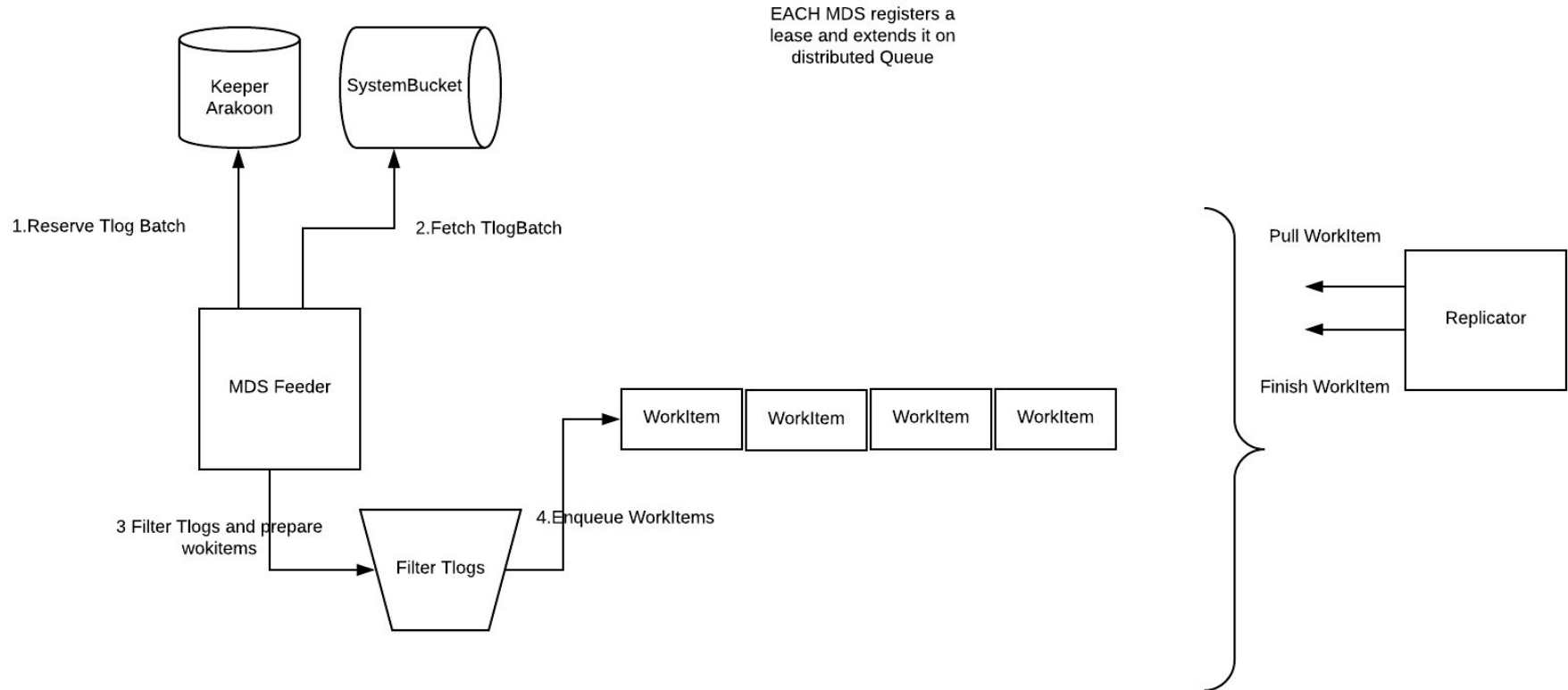
Meta Data steamer enables 2-site Replication



Meta Data Streamer Overview (Store Phase)



MDS (Feeder Phase)



MDS limitations

- Supports single consumer (Either 2site replication/ Object Notification Service)
- Use cases Active scale will have to support

2-site Replication

Object Notification service (External Kafka cluster)

Meta Data index and search

Real time capacity counting

Real time Quotas

Lambda

Etc..

- Extending MDS to support multiple consumers is complex

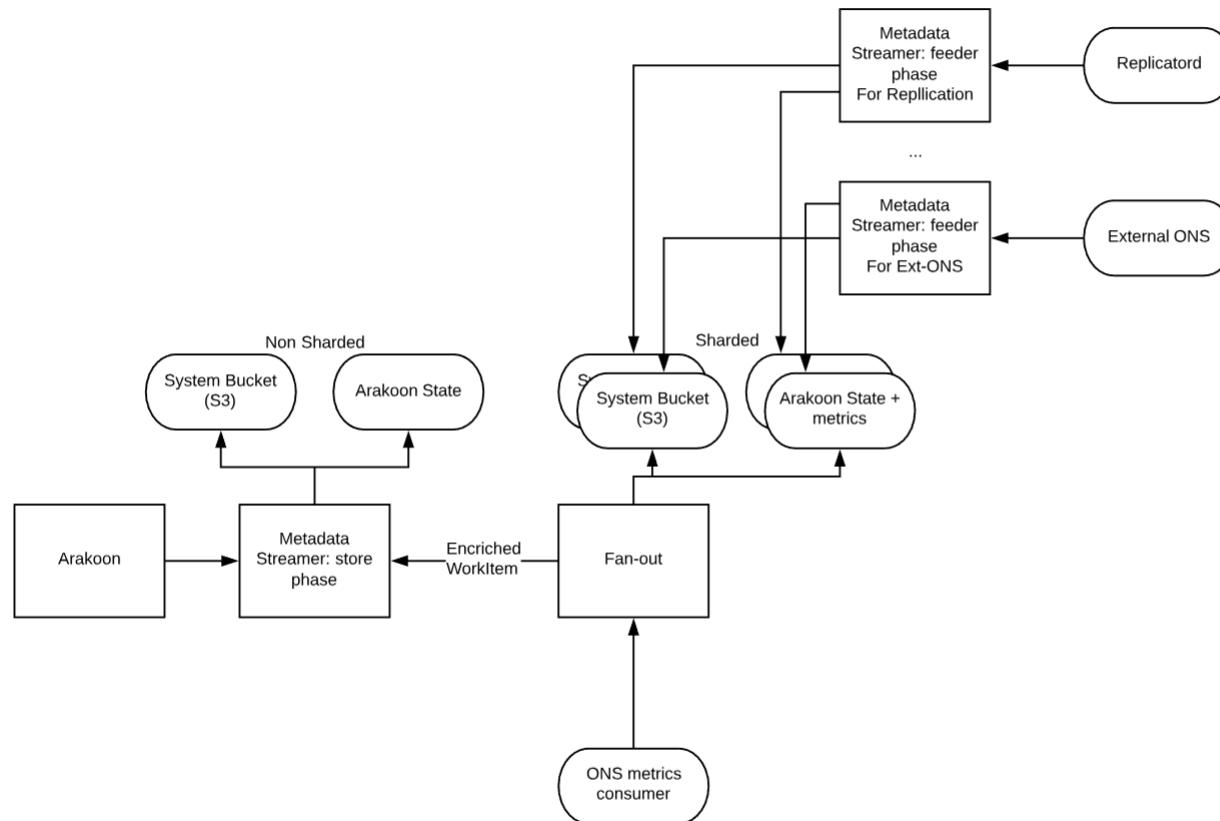
Requires Managing leases and offsets of multiple consumers

Reference counting tlog batches, before deleting them

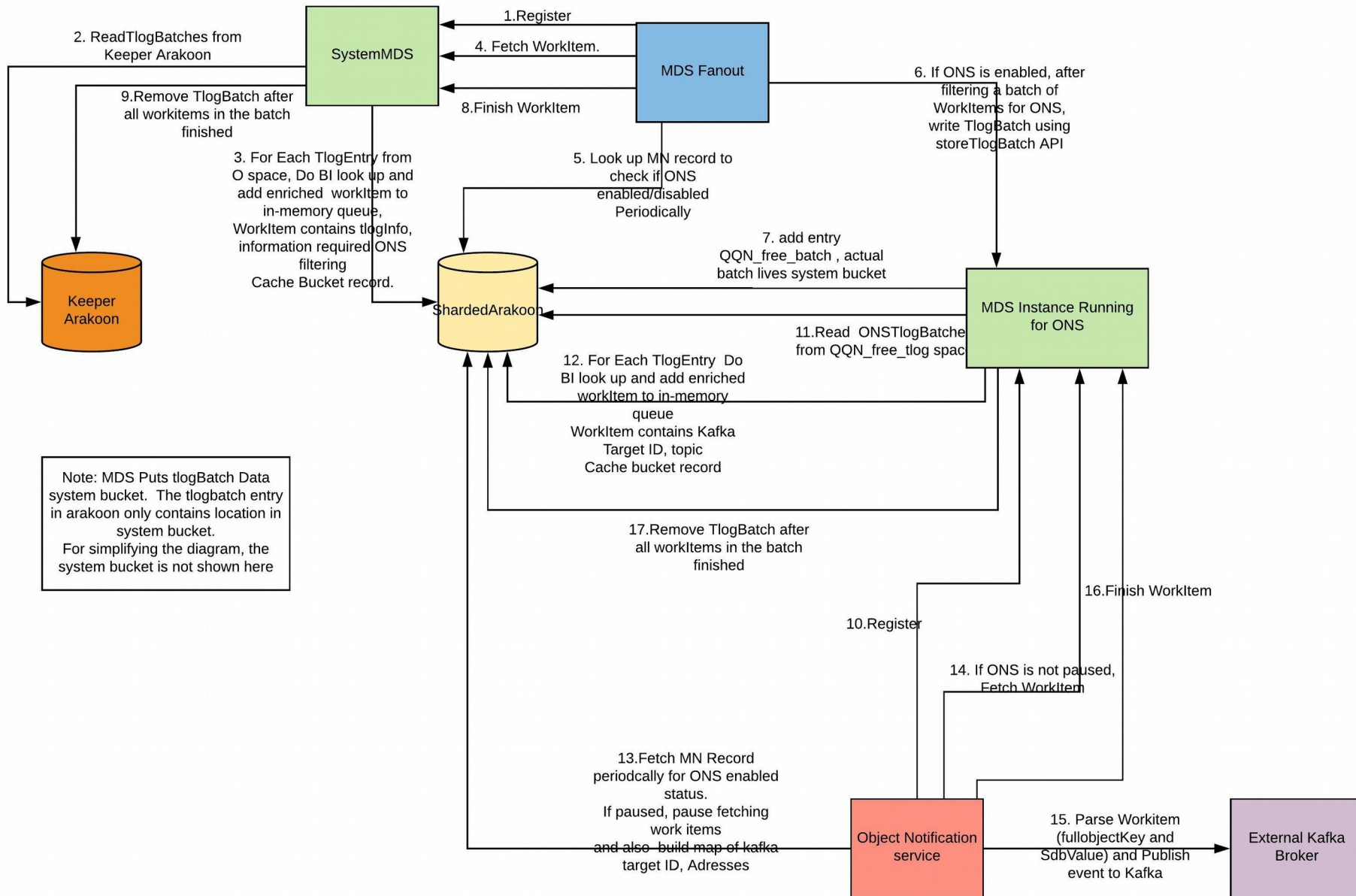
- Other option : do a fanout and run a separate instance of MDS for each use case

MDS + Fanout architecture

Extension of the existing MDS component



Object Notification Service



Abstract, flowing lines in shades of orange, red, and blue, resembling a digital or liquid motion, set against a black background.

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