

Deploying Kafka Managed Service

Purpose

This document outlines how Amazon Managed Service for Kafka (MSK) clusters should be configured in the CAMP AWS Environment. The parameters that should be modified are detailed below using the production Kafka cluster by the name of campprod as a template.

Configuration

1. **Apache Kafka version:** Always use the latest version.
2. **Cluster configuration:**

```
auto.create.topics.enable=false
default.replication.factor=2
min.insync.replicas=1
num.io.threads=32
num.network.threads=16
num.partitions=1
num.replica.fetchers=8
socket.request.max.bytes=104857600
unclean.leader.election.enable=true
```
3. **Primary VPC configuration:**
 - AWS PrivateLink: Turned off
 - Number of zones: 2
 - Subnets: (Dependent on environment)
 - Security groups applied: (Dependent on environment)
 - Public access: Off
4. **Broker type:** kafka.m5.8xlarge
 - Brokers per zone: 3
 - Total number of brokers: 6
5. **Storage and Metrics**
 - EBS storage volume per broker: 4432 GiB
 - Provisioned storage throughput per broker: Not enabled
 - Cluster storage mode: EBS storage
 - Minimum capacity (GiB): 1
 - Maximum capacity (GiB): 7000
 - Target tracking policy:
 - Name: PRD-LLK-MSK-Storage
 - Metric: Broker storage utilization
 - Target: 75

6. **Access Control Methods:**

Unauthenticated access: Enabled

IAM role-based authentication: Not enabled

SASL/SCRAM authentication: Not enabled

TLS client authentication through AWS Certificate Manager (ACM):
Not enabled

7. **Encryption:** Encrypt data in transit

TLS encryption: Enabled

Plaintext: Enabled

Type of KMS key: AWS managed key

8. **Monitoring level:** Enhanced topic-level

Open monitoring: Not enabled

9. **Broker log delivery:** Amazon CloudWatch Logs - camp_msk_prd

Amazon S3: Not enabled

Amazon Kinesis Data Firehose: Not enabled

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