

Quick Docs - Deploy the Apache Kafka CloudFormation Template

Summary

This **quick doc** provides a quick overview of the CYLLiX CloudFormation templates, so that customers can get an idea of pre-requisites and what components are installed as part of the Template.

Installation

The CloudFormation template creates an Apache Kafka 3.8.0 stack. At this point, Apache Kafka 3.9.0 is available, but it is our policy to stay one release behind unless there are critical updates required.

- Prerequisite
 - Select *Choose an existing template*
- Specify template source
 - Select *Amazon S3 URL* or *Upload a template file*
- Inputs **All inputs are required to be provided despite the defaults**
 - Stack Name - Provide a meaningful name for the Stack. For e.g., *Apache Kafka KRaft - Dev*
 - Parameters
 - Section 1 - Network Configuration
 - VPCCidr - Specify the VPC CIDR - Provide a range that can be split into 3 /27 subnets. *Defaults to 172.16.0.0/20*
 - PublicSubnets - Select *true* (for public subnets-default) or *false* (for private subnets)
 - Section 2 - EC2 Configuration
 - InstanceType - Specify the Instance Type - Should be t4g.large or larger (ARM64 with EBS type). *Defaults to t4g.large*
 - HostPrefix - Provide a host prefix for the cluster - the node# will be attached to the hostname in the creation. *Defaults to*

ak. Recommend proper naming that will easily identify the host in the *alerting* infrastructure

- HostDomain - Provide the *domainname* which will qualify the FQDN. *Defaults to cyllix.am*
 - **KeyName** - Select an **existing** KeyPair name from the dropdown. The KeyName should have been created earlier and downloaded (saved). The **Key** will be required for connecting to the host. **No Default Provided**
 - Section 3 - Kafka-Cluster Egress Configuration
 - EgressCidr - Provide the CIDR range for the Egress of the Cluster. *Defaults to 0.0.0.0/0. It is strongly suggested to use this default in a public subnet*
 - Section 4 - Application Ingress Configuration
 - IngressCidr - From where Applications will connect to the Kafka-Cluster. *Defaults to 0.0.0.0/0. It is strongly suggested to not use this default in a public subnet*
- What is Created/Installed:
 - EC2
 - Three EC2 Kafka Nodes. FQDNs for the nodes are as per the *HostName##.DomainName* provided as input
 - EBS Volumes - Depends on the Template type (*Single* or *Dual*)
 - Single-disk versions have the OS and Kafka installation on a single EBS volume - typically 250GB
 - Dual-disk versions have the Kafka runtime log directories on a separate EBS volume (250GB) than the OS volume (50GB)
 - Network
 - VPC- created with the CIDR provided as the *Input*
 - Security group - created with the Ingress (*Ingress*) and Egress (*Input*) based on the type of install
 - Route53 private zone - created for the intra cluster DNS resolution

- Three subnets across three different AZs. The subnets are *public* or *private* depending on the *PublicSubnets* parameter selection
- EC2 Instance Connect

Post Installation - Reboot

Important After the install, **wait for 10 minutes** (not earlier) and **reboot** the instances created by the install – do this easily from the console by selecting the instances -> Instance state -> Reboot instance.

Troubleshooting

Check the kafka-connect.service (8083) as this requires the core services to be running. If the services fail even after the *Post Installation reboot*; login to each instance as root and where there is a failed kafka service run `/usr/local/bin/fixsvc`. This will reboot the instance.

If the services fail, you can attempt to Destroy and Create via CloudFormation. Optionally contact Support – see below.

Support

For product support on the CYLLiX CloudFormation Template or more detailed documentation, please [register](#) or [login](#) (if you have an active registration).

For Apache Kafka 3.8.0, see <https://kafka.apache.org/08/documentation.html>