Red Hat AMQ Streams on OCP Deployment

USER ACCEPTANCE TEST

Prepared For:

DXC

Red Hat Consulting

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Purpose

This document is written to acknowledge acceptance of services provided by 'Red Hat Pacific Pte Ltd' to named end-user & client via authorized signatory for each test case.

Executive Summary

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Nodes

No.	Function	Hostname	IP Address
1	Broker1	wasp-kafka-kafka-0	tbd
2	Broker2	wasp-kafka-kafka-1	tbd
3	Broker3	wasp-kafka-kafka-2	tbd
4	Bootstrap	wasp-kafka-kafka-bootstrap	tbd
5	External bootstrap	wasp-kafka-kafka-bootstrap-openshift-operators.apps.waspocp.intranet.ica.gov.sg	tbd
6	Zookeeper1	wasp-kafka-zookeeper-0	tbd
7	Zookeeper2	wasp-kafka-zookeeper-1	tbd
8	Zookeeper3	wasp-kafka-zookeeper-2	tbd

Test Scenario 1: Broker service status

Summary

Checking if Kafka broker service is running properly.

Description

Tasks	Description
Environment	UAT
Prerequisites	Kafka brokers are installed and configured already
Procedure	1. Login to kafka broker node 1 2. Run this command: “sudo systemctl status kafka” 3. Repeat the same steps in the other broker nodes
Expected Result	The command returns status “Active: active (running)”
Unforeseen circumstances	
Result	
- Broker 1	
- Broker 2	
- Broker 3	
Authorized Name/Signatory	

Test Scenario 2: Zookeeper Service Status

Summary

Checking if Zookeeper service is running properly.

Description

Tasks	Description
Environment	UAT
Prerequisites	Kafka zookeepers are installed and configured already
Procedure	1. Login to zookeeper node 1 2. Run this command: “sudo systemctl status zookeeper” 3. Repeat the same steps in the other zookeeper nodes
Expected Result	The command returns status “Active: active (running)”
Unforeseen circumstances	
Result	
- Zookeeper 1	
- Zookeeper 2	
- Zookeeper 3	
Authorized Name/Signatory	

Test Scenario 3: Zookeeper Authentication

Summary

Examine whether authentication processes in Zookeeper Services are running properly. This is a negative test scenario where Kafka Zookeeper client authentication configuration is removed to get authentication error from Zookeeper.

Description

Tasks	Description
Environment	UAT
Prerequisites	Zookeepers are installed and authentication is configured already. Kafka brokers are running normally.
Procedure	1. Login to broker node 3, then run these commands: 2. `sudo mv /opt/kafka/config/jaas.conf /opt/kafka/config/jaas.conf.bak` 3. `sudo mv /opt/kafka/config/jaas.conf.test /opt/kafka/config/jaas.conf` 4. `sudo systemctl restart kafka` 5. `tail -f /opt/kafka/logs/server.log` 6. Login to any zookeeper node 7. Run this command: `sudo systemctl restart zookeeper` 8. Observe the log in the zookeeper node for error message 9. Stop the tail command, then revert the settings to the previous state 10. `sudo mv /opt/kafka/config/jaas.conf /opt/kafka/config/jaas.conf.test` 11. `sudo mv /opt/kafka/config/jaas.conf.bak /opt/kafka/config/jaas.conf` 12. `sudo systemctl restart kafka`
Expected Result	The log should show Error (ZooKeeperClient Kafka Server) Auth failed
Unforeseen circumstances	
Result	

Authorized Name/Signatory

Test Scenario 4: Broker Authentication

Summary

Examine whether authentication processes in Kafka Broker Services are running properly.

Description

Tasks	Description
Environment	UAT
Prerequisites	Kafka brokers are installed and authentication are configured already
Procedure	1. Login to broker node 3, then run these commands: 2. `export KAFKA_OPTS="-Djava.security.auth.login.config=/opt/kafka/config/jaas.conf"` 3. Run this command to connect using the incorrect credentials `/opt/kafka/bin/kafka-topics.sh --bootstrap-server=wasp-kafka-kafka-bootstrap:9093 --list --command-config=/home/kafka/client.properties.test` 4. Run this command to connect using the correct credentials `/opt/kafka/bin/kafka-topics.sh --bootstrap-server=wasp-kafka-kafka-bootstrap:9093 --list --command-config=/home/kafka/client.properties`
Expected Result	The first command should show authentication failed error. If the authentication succeeds, the command should return the list of existing topics.
Unforeseen circumstances	
Result	
Authorized Name/Signatory	

Test Scenario 5: Manual Topic Creation

Summary

Examine whether messages are stored and readable in Kafka Broker, and also whether topics are created automatically.

Description

Tasks	Description
Environment	UAT
Prerequisites	Kafka brokers are installed and configured already

Procedure	1. Login to any kafka broker node
	2. Run this command to create topic 'testTopic':
	`/opt/kafka/bin/kafka-topics.sh --create --zookeeper wasp-kafka-zookeeper-0:2181 --replication-factor 3 --partitions 1 --topic testTopic`
	3. Kafka will respond that the topic has been successfully created.
	4. Run this command to view the created topic:
	`/opt/kafka/bin/kafka-topics.sh --zookeeper wasp-kafka-zookeeper-0:2181 --describe --topic testTopic`

Expected Result	Topic is created with 3 replicas and 1 partition
Unforeseen circumstances	
Result	
- Broker 1	
- Broker 2	
- Broker 3	
Authorized Name/Signatory	

Test Scenario 6: Internal Clients Produce & Consume Message

Summary

Examine whether messages are stored and readable in Kafka Brokers with internal clients.

Description

Tasks	Description
Environment	UAT
Prerequisites	Kafka brokers are installed and configured already

Procedure	1. Login to any kafka broker node
	2. Run this command:
	`/opt/kafka/bin/kafka-console-producer.sh --broker-list wasp-kafka-kafka-bootstrap:9093 --topic testTopic --producer.config /home/kafka/client.properties`
	3. Login to another kafka broker
	4. Run this command:
	`/opt/kafka/bin/kafka-console-consumer.sh --bootstrap-server wasp-kafka-kafka-bootstrap:9093 --topic testTopic --from-beginning --consumer.config /home/kafka/client.properties`
	5. Back to broker node in step 1, type any message there
	6. Check output in broker node in step 3

Expected Result	Broker node 2 should show the messages typed in broker node 1
Unforeseen circumstances	
Result	
- Broker 1	
- Broker 2	
- Broker 3	
Authorized Name/Signatory	

Test Scenario 7: External Clients Produce & Consume Message

Summary

Examine whether messages are stored and readable in Kafka Brokers with external clients.

Description

Tasks	Description
Environment	UAT
Prerequisites	Kafka brokers are installed and configured already

Procedure	1. Run this command on bastion server:
	`bin/kafka-console-producer.sh --broker-list https://wasp-kafka-kafka-bootstrap-openshift-operators.apps.waspocp.intranet.ica.gov.sg:443 --producer.config client.properties --topic testTopic`
	2. Run this command on bastion server:
	`bin/kafka-console-consumer.sh --bootstrap-server https://wasp-kafka-kafka-bootstrap-openshift-operators.apps.waspocp.intranet.ica.gov.sg:443 --consumer.config client.properties --topic testTopic --from-beginning`
	7. Back to terminal in step 1, type any message there
	8. Check output in terminal in step 2

Expected Result	Terminal 2 should show the messages typed in terminal 1
Unforeseen circumstances	
Result	
- Broker 1	
- Broker 2	
- Broker 3	
Authorized Name/Signatory	