

Provisioning the Oracle Event Hub Cloud Service

Before You Begin

Purpose

In this tutorial, you learn to provision the Oracle Event Hub Cloud Service.

There are three sections in this tutorial:-

1. [Creating an Oracle Event Hub Cloud Service Cluster](#)
2. [Creating an Oracle Event Hub Cloud Service Topic](#)
3. [Providing Access to the Cluster](#)

Time to Complete

30 minutes

Background

Oracle Event Hub Cloud Service provides a highly available and scalable messaging platform. This service provides a distributed streaming data platform for Apache Kafka.. A Kafka instance is a compute cluster of one or more servers called nodes, that store streams of records (messages) in categories called topics. There are 3 key capabilities inherent in a Kafka Server:

- 1)It lets you publish and subscribe to the streams of records, in some ways similar to an email system.
- 2)It stores these streams of messages called records in a fault-tolerant way.
- 3)It allows for processing of these message streams as they occur.

Users can spin up one or more clusters each with a set of associated topics. The Oracle Event Hub Cloud Service - Topic is a container to hold the stream records. A producer application creates or writes the messages, and a consumer application reads from these messages.

What Do You Need?

Before starting this tutorial, you should have:

- Oracle Event Hub Cloud Service account login credentials

Context

This tutorial is part of the New Data Lake series Oracle Big Data Journey. The sequence to follow is:

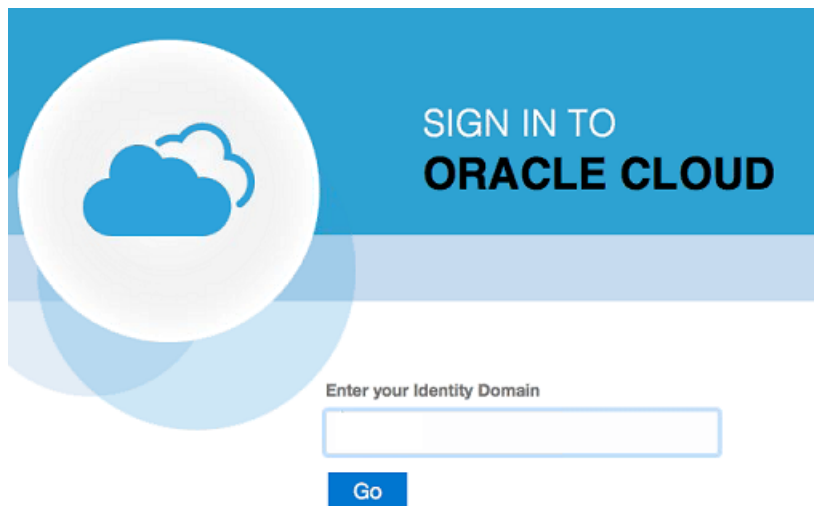
Part 1 – Creating your BDCS-CE Cluster

Part 2 – Notebooks, Object Storage, and Spark

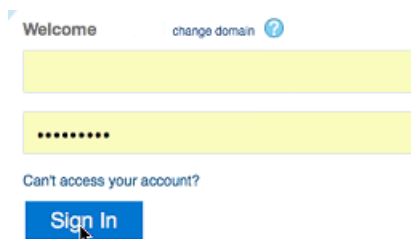
Part 3 – Provisioning the Oracle Event Hub Cloud Service

Part 4 – Working with OEHCS

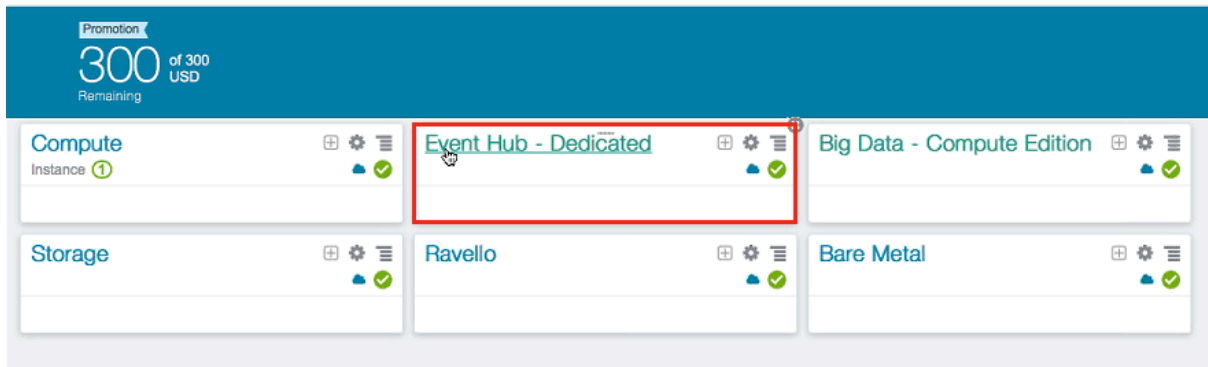
Creating an Oracle Event Hub Cloud Service Cluster



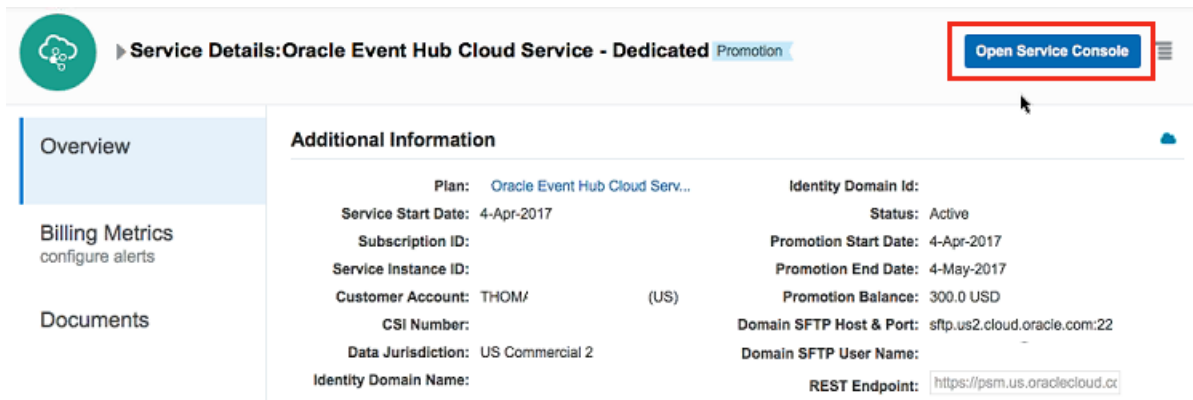
On the Sign In to Oracle Cloud page, enter the name of your identity domain. Click **Go**.



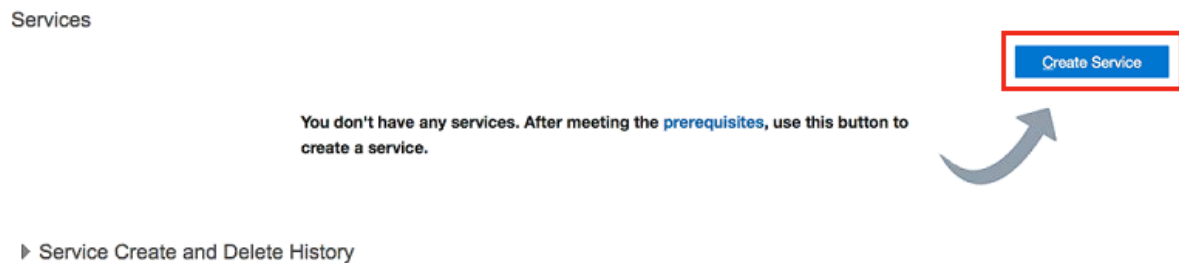
Enter your user name and password. Click **Sign In**.



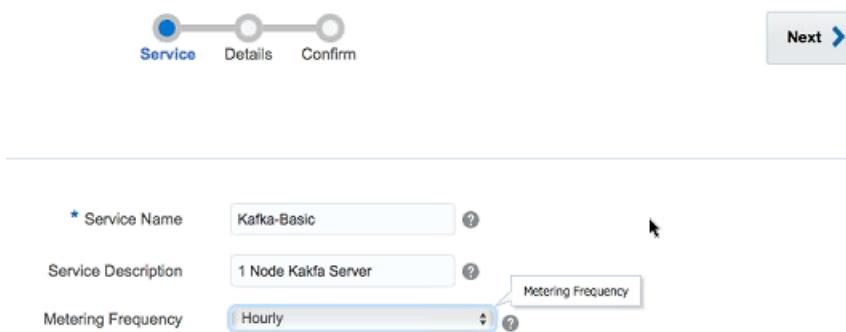
The My Services dashboard opens. Click **Event Hub – Dedicated**.



On the Service Details page, click **Open Service Console**.



On the Services page, click **Create Service**.



The Oracle Event Hub Cloud Service — Platform Create Service wizard starts and the Service page is displayed.

On the Service page, provide a name, **Kafka-Basic**, and description, **1 Node Kafka Server**, for the cluster, and then click **Next** to advance to the Service Details page.

The screenshot shows the 'Service Details' configuration page. At the top, there are navigation buttons: 'Previous', 'Cancel', and 'Next'. A progress indicator shows three steps: 'Service', 'Details' (current), and 'Confirm'. Below the navigation is the title 'Service Details' and a subtitle 'Provide additional configuration parameters for Oracle Event Hub Cloud Service - Platform.' with a 'Selection Summary' link. The configuration is divided into three sections: 'Configuration', 'REST Proxy', and 'Kafka'.
- 'Configuration' section: 'Deployment Type' is set to 'Basic'. 'SSH Public Key' has an 'Edit' button.
- 'REST Proxy' section: 'Enable REST Access' is unchecked.
- 'Kafka' section: 'Number of Nodes' is set to '1'. 'Compute Shape' is set to 'OC2m - 2.0 OCPU, 30.0GB RAM'. 'Usable Topic Storage (GB)' is set to '50'. 'Total Allocated Storage (GB)' is '50.0'.

On the Service Details page, provide additional configuration parameters.

Deployment Type – **Basic**, basic deployment runs Kafka broker and Zookeeper on same node(s). This is typical for development/test clusters.

SSH Public Key – Click **Edit** to specify the public key. You can upload a file containing the public key value if you have generated a key pair.

Number of Nodes – **1**

Compute Shape – **OC2m – 2.0 OCPU, 30.0GB RAM**

Usable Topic Storage – **50**

Enable Rest Access – **unchecked**, you don't need to enable rest access in this tutorial.

Click **Next**.



Confirmation

Confirm your responses and create this Oracle Event Hub Cloud Service - Platform instance.

Service

Service Name: **Kafka-Basic**
Service Description: **1 Node Kafka Server**
Service Level: **Oracle Event Hub Cloud Serv...**
Metering Frequency: **Hourly**
Software Release: **Kafka Release 0.9.0.1.0**

Configuration

Deployment Type: **Basic**
SSH Public Key: **id_rsa.pub**

REST Proxy

Enable REST Access: **false**

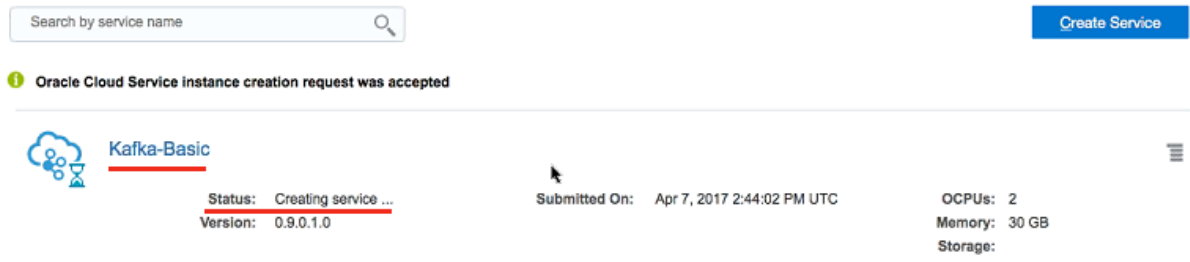
Kafka

Number of Nodes: **1**
Compute Shape: **OC2m - 2.0 OCPU, 30.0GB RAM**
Usable Topic Storage (GB): **50**

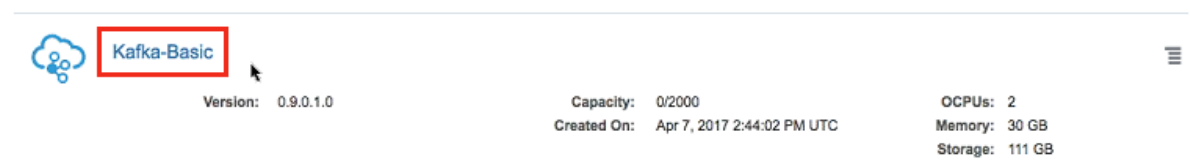
On the Confirmation page, review the information listed. If you're satisfied with what you see, click **Create** to create the cluster.

If you need to change something, click Previous at the top of the wizard to step back through the pages, or click Cancel to cancel out of the wizard without creating a new cluster.

Services



On the Service Console page, you can see that the status of Kafka-Basic instance is Creating service.... It takes some minutes to create it. Refresh your explorer about every 5 minutes to check the latest status.



Once the Kafka-Basic instance is created, click the name of the instance, **Kafka-Basic**, to go to the Service Overview page.

The screenshot shows the 'Service Overview' page for 'Kafka-Basic'. On the left, there is a navigation menu with 'Overview' and 'Administration'. The 'Overview' section displays key metrics: 1 Node, 0 Used Partitions, 2000 Total Partitions, and 0 Patches available. The main content area shows 'Service Overview' with a timestamp 'As of Apr 7, 2017 2:53:42 PM UTC'. It features a summary bar with 1 Nodes, 2 OCPUs, 30 GB Memory, and 111 GB Storage. Below this, the status is 'Ready', Compute Shape is 'oc2m', and Deployment Type is 'Basic'. The 'Connect Descriptor' is highlighted in red and is '129.144.180.25:6667'. A 'Resources' section lists details for the instance: Host Name: kafka-basic-kafka-zk-1, Public IP: 129.144.180.25, Instance: Runs Kafka-Zookeeper-1, OCPUs: 2, Memory: 30 GB, and Storage: 111 GB.

On the Service Overview page, you can see the information of Statues, Host Name, Public IP, Instance name etc.

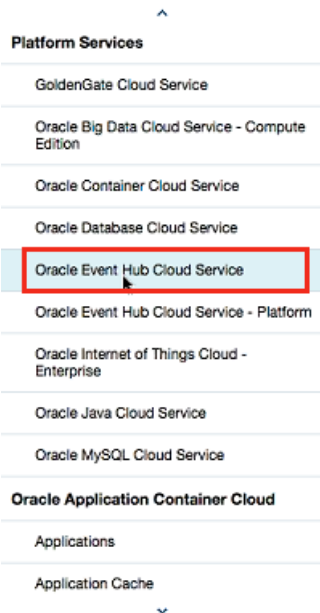
Notice the **Connect Descriptor** element. This is the host name that you will use while connecting to the **Kafka - Basic** service. You will learn how to configure access rules to the services in third section of this tutorial.

Click **Oracle Event Hub Cloud Service – Platform** at the top left corner to go to the Service Console page.

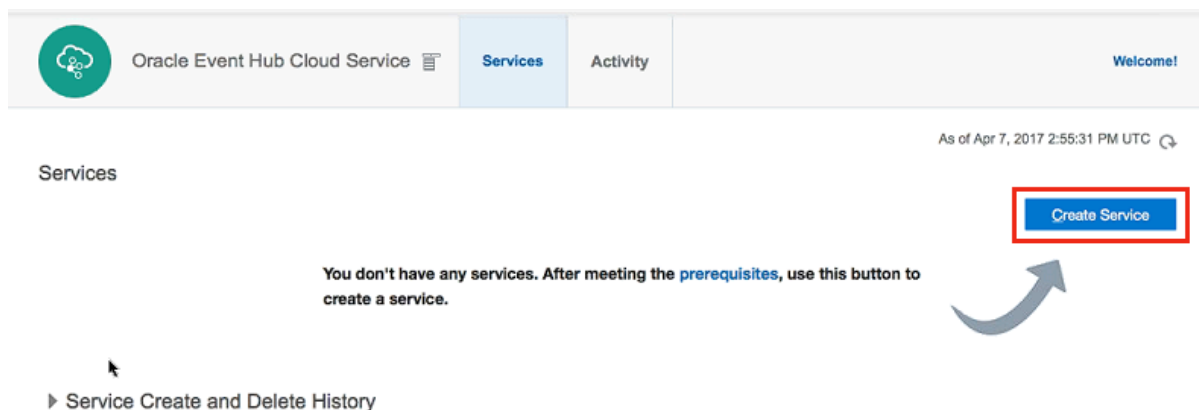
Creating an Oracle Event Hub Cloud Service Topic

The screenshot shows the 'Services' page of the Oracle Event Hub Cloud Service - Platform. At the top, there is a navigation bar with 'Oracle Event Hub Cloud Service - Platform' and a red box around the 'Services' icon. The main content area shows a 'Summary' bar with 1 Services, 2 OCPUs, 30 GB Memory, 111 GB Storage, 1 Public IPs, and 0/2000 Used/Total Partitions. Below this, there is a 'Services' section with a search bar and a 'Create Service' button. The 'Kafka-Basic' service instance is listed with details: Version: 0.9.0.1.0, Capacity: 0/2000, Created On: Apr 7, 2017 2:44:02 PM UTC, OCPUs: 2, Memory: 30 GB, and Storage: 111 GB.

On the Services page of **Oracle Event Hub Cloud Service - Platform**, click the  icon at the top left corner.



Click **Oracle Event Hub Cloud Service** in the pop-up menu.



In the Services page, click **Create Service**.

The Create Service screen appears. Provide the following details.

Service Name: TopicA

Service Description: First Topic for Kafka

Hosted On: Kafka – Basic,

Number of Partitions: 1

Retention Period (Hours): 72

Note: Kafka – Basic is the name of the Oracle Event Hub Cloud Service - Platform cluster you created in the previous section of this tutorial.

Click **Next**.

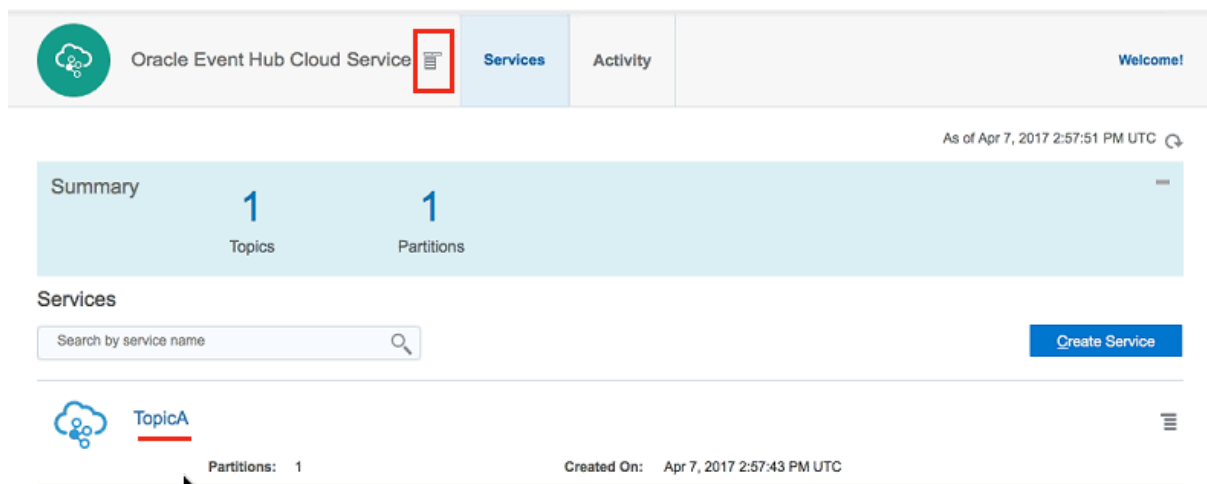


Confirmation

Confirm your responses and create this Oracle Event Hub Cloud Service instance.

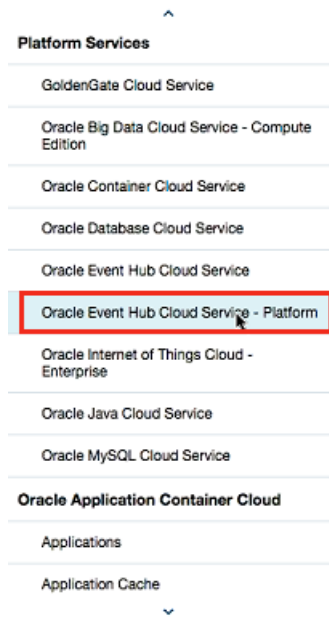
Service	Topic
Service Name: TopicA	Partitions: 1
Service Description: First Topic for Kafka	Retention Period (Hours): 72
Service Level: Oracle Event Hub Cloud Serv...	
Metering Frequency: Hourly	
Software Release: Kafka Release 0.9.0.1.0	

On the Confirmation page, review the information listed. If you're satisfied with what you see, click **Create** to create the topic.



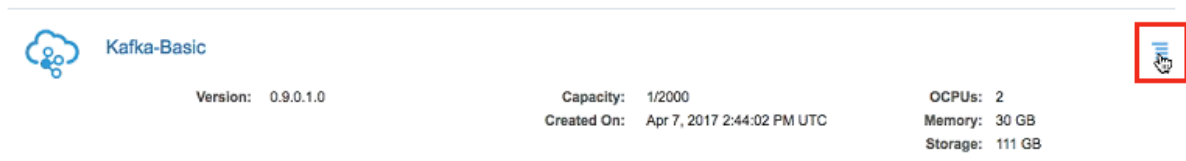
The control returns to the Services page. In the Services page, you could now see the new TopicA service has been created.

Click the **menu icon**  at the top left corner.




Click **Oracle Event Hub Cloud Service – Platform** in the pop-up menu.

Providing Access to the Cluster



The control goes to the Services page of Oracle Event Hub Cloud Service – Platform. Click the **menu icon**

 on the right of Kafka – Basic area.



Click **Access Rules** in the pop-up menu.

Access Rules

You can use access rules to control network access to service components. On this page, you can manage your access rules.

Results per page: 10 12 result(s) as of Apr 7, 2017 2:59:07 PM UTC

Status	Rule Name	Source	Destination	Ports	Protocol	Description	Rule Type	Actions
	ora_p2kafka_ssh	PUBLIC-INTERNET	kafka_KAFKA_SERVE...	22	TCP	Permit ssh access to nodes	DEFAULT	
	ora_trusted_hosts_kafka	1	... kafka_KAFKA_SERVE...	6667	TCP	DO NOT MODIFY: Permit s...	SYSTEM	
	sys_infra2kaf_admin_ssh	PAAS-INFRA	kafka_ADMIN_HOST	22	TCP	DO NOT MODIFY: Permit P...	SYSTEM	
	ora_p2confluent_ssh	PUBLIC-INTERNET	restprxy_RESTPRXY_...	22	TCP	Permit ssh access to nodes	DEFAULT	

The Access Rules page is displayed. Click **Create Rule**.

Create Access Rule

* Rule Name: ZookeeperInternetAccess ?

Description: Access from internet and desktop ?

* Source: PUBLIC-INTERNET ?

* Destination: kafka_ZK_SERVER ?

* Destination Port(s): 2181 ?

* Protocol: TCP ?

This operation may take some time.

Create **Cancel**

The Create Access Rule screen is displayed. Provide the following details.

- Rule Name:** ZookeeperInternetAccess
- Description:** Access from internet and desktop
- Source:** PUBLIC-INTERNET
- Destination:** kafka_ZK_SERVER
- Destination Ports:** 2181
- Protocol:** TCP

Note: By default the native access to Kafka is blocked due to security reasons. For the purpose of this tutorial, we will open it up to public IP. However, when setting up for development, test, or production, do restrict the native access to specific IP Addresses. You can provide access to specific machines by providing their address in the source field, or by using custom rules.

Click **Create**.

Create Access Rule

* Rule Name: KafkaInternetAccess ?

Description: Access to Kafka service from internet or desktop ?

* Source: PUBLIC-INTERNET ?

* Destination: kafka_KAFKA_SERVER ?

* Destination Port(s): 6667 ?

* Protocol: TCP ?

This operation may take some time.

Create **Cancel**

Create the second rule in the same way.

In the Create Access Rule screen window, provide the following details.

Rule Name: KafkaInternetAccess

Description: Access to Kafka service from internet or desktop

Source: PUBLIC_INTERNET

Destination: kafka_KAFKA_SERVER

Destination Ports: 6667

Protocol: TCP

Click **Create**.

The newly created rules are listed in the Access Rules page.

Want to Learn More?

- [Oracle Event Hub Cloud Service](#)
- [Using Oracle Event Hub Cloud Service](#)