

Deployment

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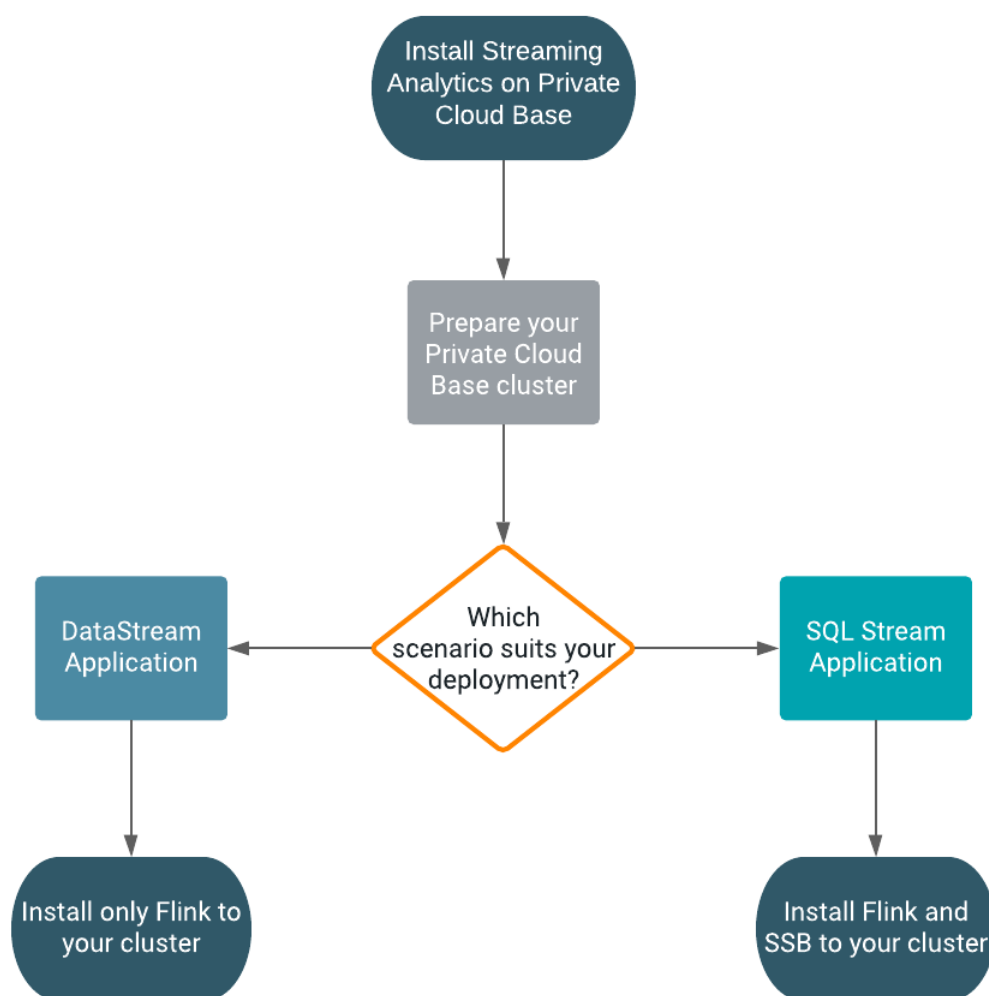
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Deployment scenarios

You can deploy Streaming Analytics on Private Cloud Base depending on the application you want to build.

- DataStream application using only Flink. In this case, you need to create a Flink application cluster.
- SQL Streaming application using Flink with SQL Stream Builder. In this case, you need to create a Streaming SQL cluster.

You can use the following workflow to have an understanding of the deployment process:



Cluster service layout with Flink

In Cloudera Streaming Analytics (CSA), Flink has mandatory dependencies with HDFS, YARN, and Zookeeper. You need to assign the Flink Gateway and HistoryServer roles to the host, based on the mandatory dependencies.

Flink jobs are executed as YARN applications. HDFS is used to store recovery and log data, while ZooKeeper is used for high availability coordination for jobs. In a standard layout, an Apache Kafka cluster is often located close to the YARN cluster executing the Flink cluster.

The Flink Gateway is collocated with YARN and HDFS Gateways. The Flink HistoryServer is collocated with an HDFS role, which can be either an active role or a Gateway. Use the following general service layout when collocating Flink roles and dependencies.



Cluster service layout with SSB

In Cloudera Streaming Analytics (CSA), SQL Stream Builder (SSB) has mandatory dependencies with Flink and Kafka. But due to its dependency with Flink, you also need to add YARN, HDFS and Zookeeper as a mandatory service on your cluster. You need to assign the SSB roles in the same way as you assign the Flink roles.

