

Anarion Technologies – Apache DataSketches

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Apache DataSketches on Ubuntu26

by Anarion Technologies

Virtual Machines

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Production Ready VM on Ubuntu26.04 LTS + Free Support

Apache DataSketches is a high-performance open-source library for approximate data analysis, enabling fast, memory-efficient processing of large-scale datasets using probabilistic data structures.

This virtual machine comes pre-installed with Apache DataSketches 9.x on Ubuntu 26.04 LTS, providing a ready-to-use environment for developers, data engineers, and researchers working on streaming analytics, big data processing, and real-time statistics. The image includes OpenJDK 25, Maven, Git, and all required dependencies for building and running DataSketches-based applications without manual setup.

Apache DataSketches supports scalable analytics for cardinality estimation, frequency analysis, quantiles, histograms, and set operations. It is widely used in distributed systems to reduce memory usage while maintaining accurate approximate results, making it suitable for real-time and large-scale data pipelines.

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Apache DataSketches on Ubuntu26

By Anarion Technologies

Plan

Apache Datasketches on Ubuntu26



Pricing

Starting at \$0.03/hour

Description

Apache Datasketches on Ubuntu26

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Start with a pre-set configuration

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Overview

Plans + Pricing

Usage Information + Support

Ratings + Reviews

Apache DataSketches is a high-performance open-source library for approximate data analysis, enabling fast, memory-efficient processing of large-scale datasets using probabilistic data structures.

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Apache DataSketches supports scalable analytics for cardinality estimation, frequency analysis, quantiles, histograms, and set operations. It is widely used in distributed systems to reduce memory usage while maintaining accurate approximate results, making it suitable for real-time and large-scale data pipelines.

This image is configured with Ubuntu 26.04 LTS and latest security updates, ensuring a stable and production-ready environment for development, testing, and deployment of approximate computing solutions.

Key Features

Creating a virtual machine, enter or select appropriate values for zone, machine type, resource group and so on as per your choice.

» Create a virtual machine

Basics Disks Networking Management Advanced Tags Review + create

Create a virtual machine that runs Linux or Windows. Select an image from Azure marketplace or use your own customized image. Complete the Basics tab then Review + create to provision a virtual machine with default parameters or review each tab for full customization. [Learn more](#)

Project details

Select the subscription to manage deployed resources and costs. Use resource groups like folders to organize and manage all your resources.

Subscription * ⓘ Azure subscription 1

Resource group * ⓘ Demo [Create new](#)

Instance details

Virtual machine name * ⓘ Demo ✓

Region * ⓘ (US) East US

[Review + create](#) < Previous Next : Disks >

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Azure VMs have one operating system disk and a temporary disk for short-term storage. You can attach additional data disks. The size of the VM determines the type of storage you can use and the number of data disks allowed. [Learn more](#)

Disk options

OS disk type * ⓘ Premium SSD (locally-redundant storage) ▼

Encryption type * (Default) Encryption at-rest with a platform-managed key ▼

Enable Ultra Disk compatibility ⓘ ☐
Ultra disk is available only for Availability Zones in eastus.

Data disks

You can add and configure additional data disks for your virtual machine or attach existing disks. This VM also comes with a temporary disk.

i Adding unmanaged data disks is currently not supported at the time of VM creation. You can add them after the VM is

Review + create

< Previous

Next : Networking >

Create a virtual machine ...

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Define network connectivity for your virtual machine by configuring network interface card (NIC) settings. You can control ports, inbound and outbound connectivity with security group rules, or place behind an existing load balancing solution. [Learn more](#)

Network interface

When creating a virtual machine, a network interface will be created for you.

Virtual network * ⓘ (new) Demo-vnet ▼
[Create new](#)

Subnet * ⓘ (new) default (10.1.0.0/24) ▼

Public IP ⓘ (new) Demo-ip ▼
[Create new](#)

NIC network security group ⓘ
☐ None
☒ Basic
☐ Advanced

Review + create

< Previous

Next : Management >

Create a virtual machine ...

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Configure monitoring and management options for your VM.

Azure Security Center

Azure Security Center provides unified security management and advanced threat protection across hybrid cloud workloads. [Learn more](#)

✓ Your subscription is protected by Azure Security Center basic plan.

Monitoring

Boot diagnostics ⓘ ☐ On
☒ Off

Enable OS guest diagnostics ⓘ ☐

Identity

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Tags are name/value pairs that enable you to categorize resources and view consolidated billing by applying the same tag to multiple resources and resource groups. [Learn more about tags](#)

Note that if you create tags and then change resource settings on other tabs, your tags will be automatically updated.

Name ⓘ	Value ⓘ	Resource
		12 selected v

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Create a virtual machine

✓ Validation passed

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i Cost given below is an estimate and not the final price. For all your pricing needs, please use the pricing calculator. [↗](#)

Price

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0.8652 INR/hr
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TERMS

By clicking "Create", I (a) agree to the legal terms and privacy statement(s) associated with the Marketplace offering(s) listed above; (b) authorize Microsoft to bill my current payment method for the fees associated with the offering(s), with the same billing frequency as my Azure subscription; and (c) agree that Microsoft may share my contact, usage and transactional information with the provider(s) of the offering(s) for support, billing and other transactional activities. Microsoft does not provide rights for third-party offerings. See the [Azure Marketplace Terms](#) for additional details.

[< Previous](#)

[Next >](#)

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After Process of Create Virtual Machine. You have got an Option Go to Resource Group

Click Go to Resource Group

Copy the Public IP Address

SSH into Terminal and Run these Commands:

```
$ sudo su
```

```
$ cd ../../
```

```
$ sudo apt update && sudo apt upgrade -y
```

```

testing@testing:~$ sudo su
root@testing:/home/testing# cd ../../
root@testing:/# sudo apt update && sudo apt upgrade -y
Hit:1 http://azure.archive.ubuntu.com/ubuntu resolute InRelease
Get:2 http://azure.archive.ubuntu.com/ubuntu resolute-updates InRelease [137
kB]
Hit:3 http://azure.archive.ubuntu.com/ubuntu resolute-backports InRelease
Get:4 http://azure.archive.ubuntu.com/ubuntu resolute-security InRelease [13
7 kB]
Get:5 https://aquasecurity.github.io/trivy-repo/deb resolute InRelease [3238
B]
Get:6 http://azure.archive.ubuntu.com/ubuntu resolute-updates/main amd64v3 P
ackages [282 kB]
Get:7 http://azure.archive.ubuntu.com/ubuntu resolute-updates/main Translati
on-en [74.0 kB]
Get:8 http://azure.archive.ubuntu.com/ubuntu resolute-updates/main amd64 Com
ponents [49.4 kB]
Get:9 http://azure.archive.ubuntu.com/ubuntu resolute-updates/main amd64 c-n
-f Metadata [5244 B]
Get:10 http://azure.archive.ubuntu.com/ubuntu resolute-updates/universe amd6
4v3 Packages [159 kB]
Get:11 http://azure.archive.ubuntu.com/ubuntu resolute-updates/universe Tran
slation-en [50.1 kB]
Get:12 http://azure.archive.ubuntu.com/ubuntu resolute-updates/universe amd6

```

Verify Java

\$ java -version

```

root@testing:/# java -version
openjdk version "17.0.19" 2026-04-21
OpenJDK Runtime Environment (build 17.0.19+10-1-26.04.2-Ubuntu)
OpenJDK 64-Bit Server VM (build 17.0.19+10-1-26.04.2-Ubuntu, mixed mode, sha
ring)

```

Verify Maven:

\$ mvn -version

Verify Apache DataSketches:

\$ ls /opt/datasketches-java

```
root@testing:/# mvn -version
Apache Maven 3.9.12
Maven home: /usr/share/maven
Java version: 25.0.3, vendor: Ubuntu, runtime: /usr/lib/jvm/java-25-openjdk-
amd64
Default locale: en, platform encoding: UTF-8
OS name: "linux", version: "7.0.0-1007-azure", arch: "amd64", family: "unix"
root@testing:/# ls /opt/datasketches-java
LICENSE NOTICE README.md pom.xml src target tools
root@testing:/#
```

Verify generated JAR:

\$ ls /opt/datasketches-java/target/*.jar

```
root@testing:/# ls /opt/datasketches-java/target/*.jar
/opt/datasketches-java/target/datasketches-java-9.0.1-SNAPSHOT-javadoc.jar
/opt/datasketches-java/target/datasketches-java-9.0.1-SNAPSHOT-sources.jar
/opt/datasketches-java/target/datasketches-java-9.0.1-SNAPSHOT-test-sources.
jar
/opt/datasketches-java/target/datasketches-java-9.0.1-SNAPSHOT-tests.jar
/opt/datasketches-java/target/datasketches-java-9.0.1-SNAPSHOT.jar
```

Verify Maven artifact:

\$ find ~/.m2/repository/org/apache/datasketches/datasketches-java - name "*.jar"

```
root@testing:/# find ~/.m2/repository/org/apache/datasketches/datasketches-j
ava -name "*.jar"
/root/.m2/repository/org/apache/datasketches/datasketches-java/9.0.1-SNAPSHO
T/datasketches-java-9.0.1-SNAPSHOT.jar
/root/.m2/repository/org/apache/datasketches/datasketches-java/9.0.1-SNAPSHO
T/datasketches-java-9.0.1-SNAPSHOT-test-sources.jar
/root/.m2/repository/org/apache/datasketches/datasketches-java/9.0.1-SNAPSHO
T/datasketches-java-9.0.1-SNAPSHOT-tests.jar
/root/.m2/repository/org/apache/datasketches/datasketches-java/9.0.1-SNAPSHO
T/datasketches-java-9.0.1-SNAPSHOT-javadoc.jar
/root/.m2/repository/org/apache/datasketches/datasketches-java/9.0.1-SNAPSHO
T/datasketches-java-9.0.1-SNAPSHOT-sources.jar
```

Run functional test:

\$ cd /opt

\$ nano TestDataSketches.java

```
root@testing: /opt
GNU nano 8.7.1 TestDataSketches.java
import org.apache.datasketches.hll.HllSketch;

public class TestDataSketches {
    public static void main(String[] args) {
        HllSketch sketch = new HllSketch();

        for (int i = 0; i < 10000; i++) {
            sketch.update(i);
        }

        System.out.println("Estimated Cardinality: " + sketch.getEstimate())
    }
}
```

\$ javac -cp /opt/datasketches-java/target/datasketches-java-9.0.1-SNAPSHOT.jar TestDataSketches.java

\$ java -cp ./opt/datasketches-java/target/datasketches-java-9.0.1-SNAPSHOT.jar TestDataSketches

```
root@testing:/opt# javac -cp /opt/datasketches-java/target/datasketches-java-9.0.1-SNAPSHOT.jar TestDataSketches.java
root@testing:/opt# java -cp ./opt/datasketches-java/target/datasketches-java-9.0.1-SNAPSHOT.jar TestDataSketches
Estimated Cardinality: 9966.96796876342
```

Thanks!!!