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Data services tools

Date published: 2022-03-15

Date modified: 2022-03-15

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Apache Iceberg in Cloudera Data Platform

Apache Iceberg is a cloud-native, high-performance open table format for organizing petabyte-scale analytic datasets on a file system or object store. Combined with Cloudera Data Platform (CDP), users can build an open data lakehouse architecture for multi-function analytics and to deploy large scale end-to-end pipelines.

Open data lakehouse on CDP simplifies advanced analytics on all data with a unified platform for structured and unstructured data and integrated data services to enable any analytics use case from ML, BI to stream analytics and real-time analytics. Apache Iceberg is the secret sauce of the open lakehouse.

The following table shows the support for Iceberg in CDP and below the table Iceberg versions v1 and v2 are defined:

Table 1: Iceberg Support Matrix

Release	Iceberg support level	SQL Engine				
		Impala	Hive	Spark	NiFi	Flink
Public Cloud Data Services	GA	v1, v2: create table, read, insert, delete, update	v1, v2: create table, read, insert, update, and delete	v1, v2: create table, read, insert, update, and delete	v1, v2: read and insert	N/A
Data Hub 7.2.16.2	GA	v1, v2: create table, read	v1: create table, read, insert, update, delete	v1, v2: create table, read, insert, update, and delete	v1, v2: read and insert	v1: create table, read, and insert
Data Hub 7.2.17	GA	v1, v2: create table, read, insert,	v1, v2: create table, read, insert, update, delete	v1, v2: create table, read, insert, update, and delete	v1, v2: read and insert	v1, v2: create table, read, append, overwrite ***
Data Hub 7.2.18	GA	v1, v2: create table, read, insert, update, and delete	v1, v2: create table, read, insert, update, delete	v1, v2: create table, read, insert, update, and delete	v1, v2: read and insert	v1, v2: create table, read, append, overwrite ***
Private Cloud Data Services 1.5.1 2023.0.13.0-20	Technical Preview (7.1.7 Base, 7.1.8 Base)	v1, v2: create table, read	v1, v2: create table, read, insert, update, and delete	v1, v2: create table, read, insert, update, and delete	No Private Cloud support	No Private Cloud support
Private Cloud Data Services 1.5.2	GA (7.1.9 Base) Technical Preview (7.1.7 Base, 7.1.8 Base)	v1, v2: create table, read, insert, and delete	v1, v2: create table, read, insert, update, and delete	v1, v2: create table, read, insert, update, and delete	v1, v2: read and insert (7.1.9 Base)	v1, v2: create table, read, and insert (7.1.9 Base)
Private Cloud Data Services 1.5.3	GA (7.1.9 Base) Technical Preview (7.1.7 Base, 7.1.8 Base)	v1, v2: create table, read, insert, update, and delete	v1, v2: create table, read, insert, update, and delete	v1, v2: create table, read, insert, update, and delete	v1, v2: read and insert (7.1.9 Base)	v1, v2: create table, read, and insert (7.1.9 Base)
Base 7.1.7 SP2, 7.1.8	No Iceberg support					
Base 7.1.9	GA	v1, v2: create table, read, insert	No Iceberg support	v1, v2: create table, read, insert, update, and delete	v1, v2: read and insert	v1, v2: create table, read, and insert

** The support for delete operations, except from Flink, shown in this table is limited to position deletes. Equality deletes are not supported in these releases except from Flink.

*** Iceberg v2 updates and deletes from Flink are a technical preview in CDP Public Cloud 7.2.17.

The [Apache Iceberg format specification](#) describes the following versions of tables:

- v1
Defines large analytic data tables using open format files.
- v2
Specifies ACID compliant tables including row-level deletes and updates.

Table 2: Iceberg Docs and Availability Matrix

Release	Docs	Iceberg Support Level
Open Data Lakehouse (Cloudera Private Cloud Base 7.1.9)	Iceberg in Open Data Lakehouse	GA
	Iceberg support for Atlas	GA
	SQL Stream Builder with Iceberg (CSA 1.11) and Flink with Iceberg (CSA 1.11) Iceberg replication policies	GA
Data Engineering (CDE) Public Cloud	Using Iceberg	GA
Data Warehouse (CDW) Public Cloud	Iceberg features	GA
Data Engineering (CDE) Private Cloud	Using Iceberg	Technical Preview
Data Warehouse (CDW) Private Cloud	Iceberg introduction Moving data into Iceberg tables on CDW	GA (7.1.9 Base), Technical Preview (7.1.7-7.1.8 Base)
Public Cloud Data Hub 7.2.16 and later	Iceberg features	Technical Preview
Public Cloud Data Hub 7.2.17 and later	Iceberg in Apache Atlas	Technical Preview
	Streaming Analytics Iceberg support in Flink	GA
	Flink/Iceberg connector	GA
	Using NiFi to ingest data into CDP Public Cloud CDW in Iceberg table format	GA
Public Cloud Data Hub 7.2.18	Iceberg in Apache Atlas	GA
Flow Management for CDP Private Cloud	Using the PutIcebergCDC processor	Technical Preview
	Using NiFi to ingest data into CDP Private Cloud Data Warehouse in Iceberg table format	GA
DataFlow (CDF) Public Cloud	Using the Kafka to Apache Iceberg ReadyFlow	GA
Cloudera Machine Learning (CML) Public Cloud	Connection to Iceberg	GA