

Cloudera Runtime 7.1.8

Apache Impala

Date published: 2020-11-30

Date modified: 2022-08-25

CLOUdera

<https://docs.cloudera.com/>

Legal Notice

© Cloudera Inc. 2024. All rights reserved.

The documentation is and contains Cloudera proprietary information protected by copyright and other intellectual property rights. No license under copyright or any other intellectual property right is granted herein.

Unless otherwise noted, scripts and sample code are licensed under the Apache License, Version 2.0.

Copyright information for Cloudera software may be found within the documentation accompanying each component in a particular release.

Cloudera software includes software from various open source or other third party projects, and may be released under the Apache Software License 2.0 (“ASLv2”), the Affero General Public License version 3 (AGPLv3), or other license terms. Other software included may be released under the terms of alternative open source licenses. Please review the license and notice files accompanying the software for additional licensing information.

Please visit the Cloudera software product page for more information on Cloudera software. For more information on Cloudera support services, please visit either the Support or Sales page. Feel free to contact us directly to discuss your specific needs.

Cloudera reserves the right to change any products at any time, and without notice. Cloudera assumes no responsibility nor liability arising from the use of products, except as expressly agreed to in writing by Cloudera.

Cloudera, Cloudera Altus, HUE, Impala, Cloudera Impala, and other Cloudera marks are registered or unregistered trademarks in the United States and other countries. All other trademarks are the property of their respective owners.

Disclaimer: EXCEPT AS EXPRESSLY PROVIDED IN A WRITTEN AGREEMENT WITH CLOUDERA, CLOUDERA DOES NOT MAKE NOR GIVE ANY REPRESENTATION, WARRANTY, NOR COVENANT OF ANY KIND, WHETHER EXPRESS OR IMPLIED, IN CONNECTION WITH CLOUDERA TECHNOLOGY OR RELATED SUPPORT PROVIDED IN CONNECTION THEREWITH. CLOUDERA DOES NOT WARRANT THAT CLOUDERA PRODUCTS NOR SOFTWARE WILL OPERATE UNINTERRUPTED NOR THAT IT WILL BE FREE FROM DEFECTS NOR ERRORS, THAT IT WILL PROTECT YOUR DATA FROM LOSS, CORRUPTION NOR UNAVAILABILITY, NOR THAT IT WILL MEET ALL OF CUSTOMER’S BUSINESS REQUIREMENTS. WITHOUT LIMITING THE FOREGOING, AND TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, CLOUDERA EXPRESSLY DISCLAIMS ANY AND ALL IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO IMPLIED WARRANTIES OF MERCHANTABILITY, QUALITY, NON-INFRINGEMENT, TITLE, AND FITNESS FOR A PARTICULAR PURPOSE AND ANY REPRESENTATION, WARRANTY, OR COVENANT BASED ON COURSE OF DEALING OR USAGE IN TRADE.

Contents

Apache Impala Overview.....	4
------------------------------------	----------

Apache Impala Overview

The Apache Impala provides high-performance, low-latency SQL queries on data stored in popular Apache Hadoop file formats.

The Impala solution is composed of the following components.

Impala

The Impala service coordinates and executes queries received from clients. Queries are distributed among Impala nodes, and these nodes then act as workers, executing parallel query fragments.

Hive Metastore

Stores information about the data available to Impala. For example, the metastore lets Impala know what databases are available and what the structure of those databases is. As you create, drop, and alter schema objects, load data into tables, and so on through Impala SQL statements, the relevant metadata changes are automatically broadcast to all Impala nodes by the dedicated catalog service.

Clients

Entities including Hue, ODBC clients, JDBC clients, Business Intelligence applications, and the Impala Shell can all interact with Impala. These interfaces are typically used to issue queries or complete administrative tasks such as connecting to Impala.

Storage for data to be queried

Queries executed using Impala are handled as follows:

1. User applications send SQL queries to Impala through ODBC or JDBC, which provide standardized querying interfaces. The user application may connect to any impalad in the cluster. This impalad becomes the coordinator for the query.
2. Impala parses the query and analyzes it to determine what tasks need to be performed by impalad instances across the cluster. Execution is planned for optimal efficiency.
3. Storage services are accessed by local impalad instances to provide data.
4. Each impalad returns data to the coordinating impalad, which sends these results to the client.