Cloudera Operational Database ..

Monitoring and auditing

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Contents

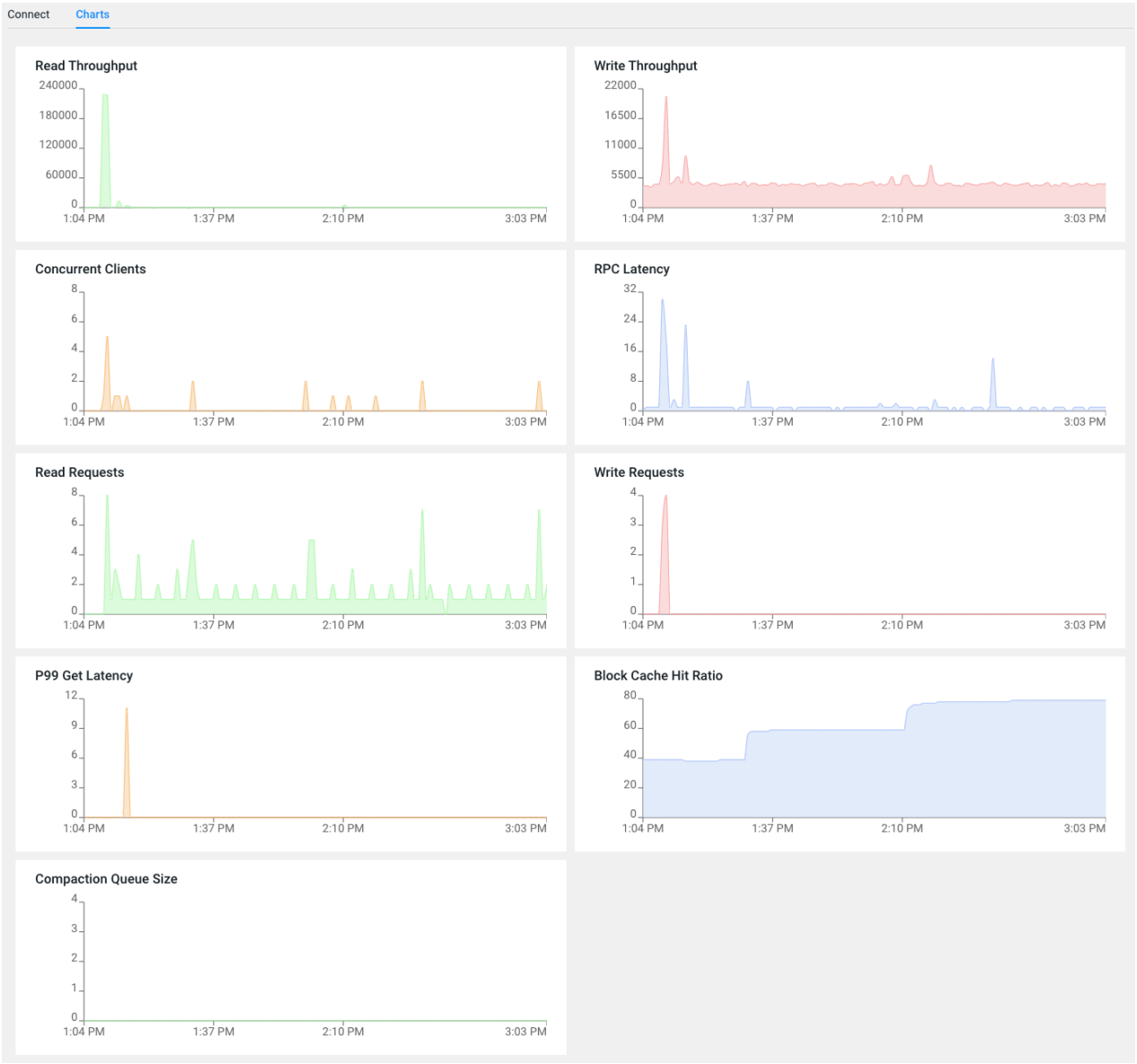
Monitor Cloudera Operational Database metrics

You can monitor your Cloudera Operational Database service using the charts in the Cloudera Operational Database user interface.

You can access the charts in the Cloudera Operational Database user interface. You have to navigate to Databases Charts .

The charts provide you with the following information:

- Read Throughput: Read throughput over time. The throughput per node greatly depends on table cell size and data request patterns.
- Write Throughput: Write throughput over time.
- Concurrent Clients: Number of clients currently connected to the database.
- RPC Latency: Latency when receiving or sending bytes from the RPC in the RegionServer.
- Read Requests: Total number of read requests per second.
- Write Requests: Total number of write requests per second.
- P99 Get Latency: 99th percentile of Get operation latency.
- Block Cache Hit Ratio: The percent of the time that requests with the block cache turned on hit the block cache.
- Compaction Queue Size: Size of the compaction queue.



Related Information

Creating triggers and monitoring replication-related metrics in Cloudera Manager

Query Cloudera Operational Database event log and audit events

Cloudera Operational Database logs and audits important events such as the Cloudera Operational Database CRUD operations and database access. You can query these audit events for a specific time interval.

Audit events give you an understanding of the Cloudera Operational Database operations during your specified time interval.

To view the event logs for a specific time interval, run the following command in the Cloudera CLI:

```
$ clients/cdpcli/cdp.sh audit list-events --from-timestamp YYYY-MM-DDT00:00:00Z --to-timestamp YYYY-MM-DDT00:00:00Z --event-source opdb
```

Note that you have to use the ISO-8601 standard timestamps format.

To view the command information and on-screen help, run the following command in the Cloudera CLI:

```
$ clients/cdpcli/cdp.sh audit list-events
```

The audit query result displays event details such as event name, time stamp, accountID, requestID, and result code. Some events do not display a success or failure result codes; these are simple events that indicate that an action succeeded.

Collecting operational database diagnostic bundle

Learn how to download or upload diagnostic bundles to troubleshoot issues in a Cloudera Operational Database environment.

About this task

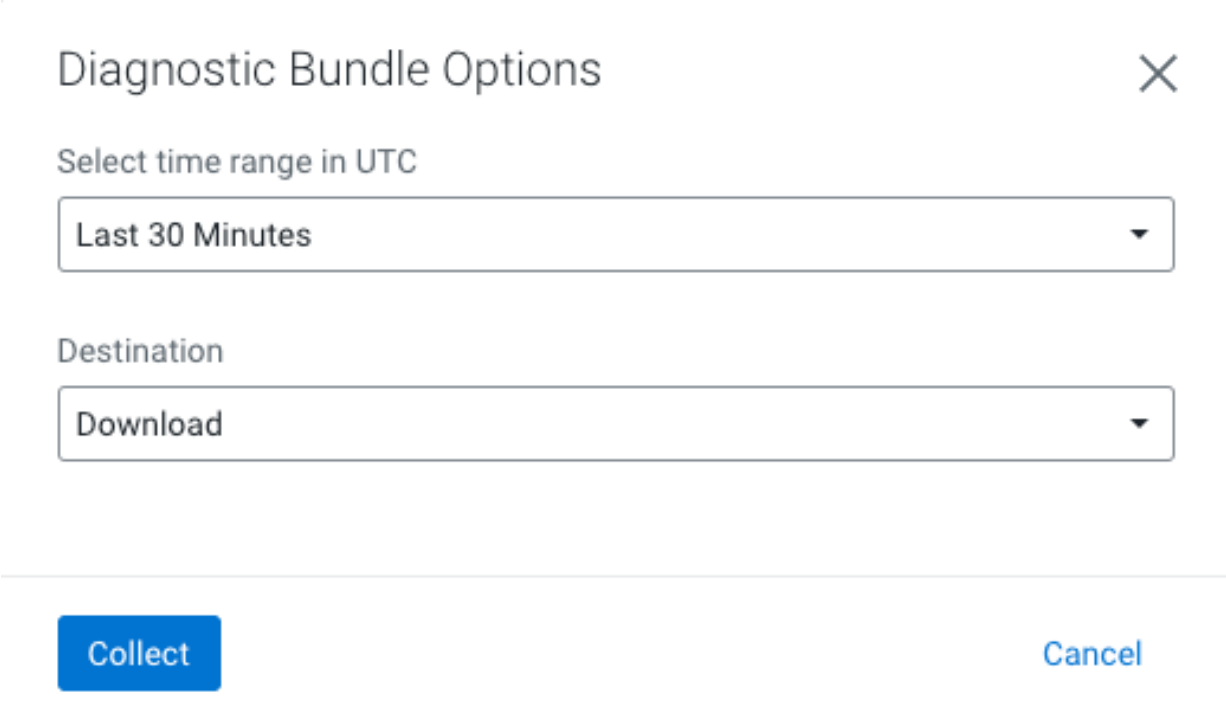
To troubleshoot issues in your Cloudera Operational Database, you can download diagnostic bundles of log files. These log files are generated when you run some operations in your Cloudera Operational Database environment.

Before you begin

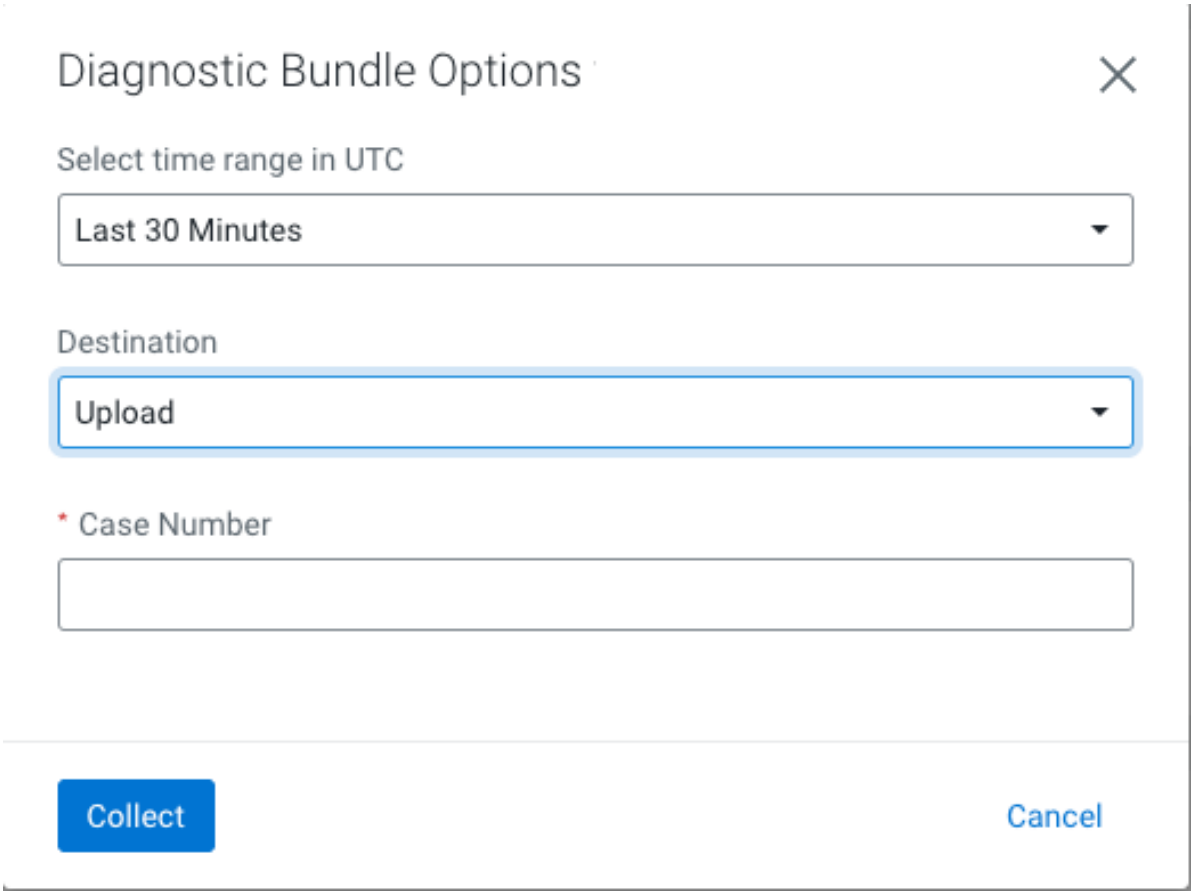
You must be logged into the Cloudera Operational Database as an administrator.

Procedure

1. Log in to the Cloudera Operational Database web interface.
2. Find and select the database for which you want to collect the diagnostic bundle.
3. Go to the Diagnostic Bundles tab on the database details page.
4. Click Collect Diagnostic Bundle .
   The options for generating the diagnostic bundles are displayed as shown in the following image:



5. Select the time range for which you want to download the diagnostic bundle.
6. Select the destination where you want to collect the diagnostic bundle.
   - Download: You can download a diagnostic bundle to your local computer.
   - Upload: You can upload a diagnostic bundle directly to the Cloudera support incident portal. You need to specify the support case number while uploading it.

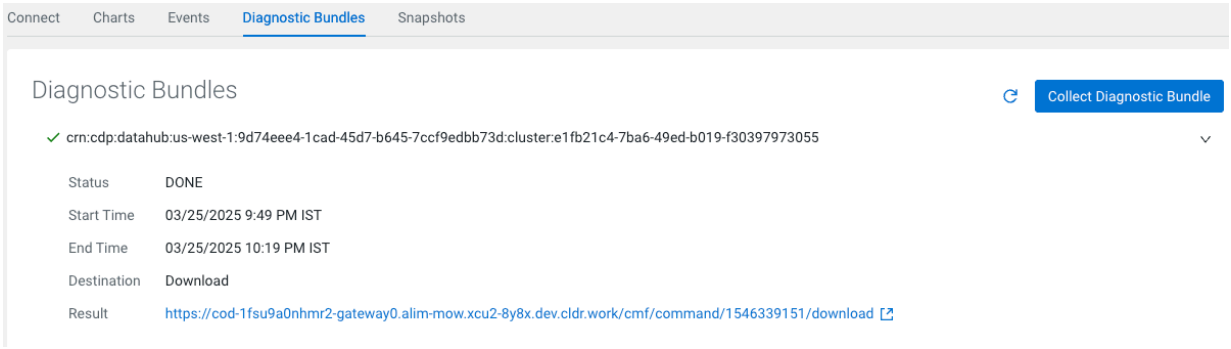


7. Click Collect.

   The following message is displayed:

   “Collection of Diagnostic Bundle for <db_name> initiated. Please go to details page for more information .”

   The jobs that have been triggered for generating the diagnostic bundles are displayed, as shown in the following image:



8. Click on the link next to the Result to download the diagnostic bundle to your computer.

   Alternatively, you can use the following CDP CLI command to collect the diagnostic data.

   `collect-diagnostics --environment-name` <****ENVIRONMENT NAME****> `--database-name` <****DATABASE NAME****> `--end-time` <****END TIME****> `[--start-time` <****START TIME****>`][--destination` <****DESTINATION****>`][--case-number` <****CSH CASE NUMBER****>`][--bundle-size-bytes` <****SIZE LIMIT****>`][--cli-input-json` <****JSON STRING****>`][--generate-cli-skeleton]`

   For more information, see the *CDP CLI documentation*.

Results

The Diagnostic Bundles tab shows the link to download the diagnostic data.

Related Information

Send a diagnostic bundle to Cloudera Support

CDP CLI documentation

Working with snapshots in Cloudera Operational Database

Know how to take and manage snapshots of the HBase tables in your Cloudera Operational Database.

The Cloudera Operational Database enables you to take a point-in-time copy of an HBase table with little performance impact on HBase. Creating and restoring snapshots does not copy any data; therefore, the effect is minimal.

Data backup and restore operations are important for your Cloudera Operational Database to support data recovery. In addition to Cloudera Operational Database, you can also use the CDP CLI, which offers multiple commands that help you manage the HBase snapshots in your Cloudera environment.

Using the Cloudera Operational Database, you can:

- Create a snapshot
- List all the restore operations performed for a snapshot in your Cloudera environment
- Restore from a saved snapshot
- Delete a snapshot

Creating a snapshot

The Cloudera Operational Database enables you to create snapshots of HBase tables.

About this task

When creating a snapshot, specify the HBase table for which you want to take the snapshot and the cloud storage location where you want to save the snapshot.

Before you begin

You must be logged into the Cloudera Operational Database as an administrator.

Procedure

1. Log in to the Cloudera Operational Database web interface.
2. Find and select the database for which you want to create a snapshot.
3. Navigate to the Snapshots tab on the Database Manager page.

4. Click the Create Snapshot button.
5. Specify the following details.

Parameter name	Description
Table Name	The fully qualified name of the HBase table for which you want to take the snapshot.
Snapshot Name	The name of the new snapshot. The snapshot name is unique per database.
Snapshot Location	The URL of the snapshot location on the object store where the snapshot is to be stored.

6. Click the Create button.

Results
You can find the status of the newly created snapshot under the Snapshot tab.

Note: You can also use the CDP CLI to create a snapshot. For more information, see *create-snapshot*.

Related Information
create-snapshot

Listing the restored snapshots

Cloudera Operational Database enables you to list all the restored snapshots in your Cloudera environment against a database.

About this task

You can check the number of times the restore operations are performed for a snapshot.

Before you begin

You must be logged into the Cloudera Operational Database as an administrator.

Procedure

1. Log in to the Cloudera Operational Database web interface.
2. Find and select the database for which you want to check the list of restored snapshots.
3. Navigate to the Snapshots tab on the Database Manager page.
4. Click the  icon for a snapshot and select the See Restored Snapshots action from the list of actions.

Results
The number of restore operations performed for a snapshot is listed. You can also check the status of each operation.

Note: You can also use the CDP CLI to list the restored snapshots. For more information, see *list-restore-snapshots*.

Related Information
list-restore-snapshots

Restoring a snapshot

Cloudera Operational Database enables you to import a snapshot automatically from the snapshot location.

Before you begin

You must be logged into the Cloudera Operational Database as an administrator.

Procedure

1. Log in to the Cloudera Operational Database web interface.
2. Find and select the database for which you want to restore a snapshot.
3. Navigate to the Snapshots tab on the Database Manager page.
4. Click the  icon for a snapshot and select the Restore Snapshot action from the list of actions.
5. Specify the following details in the Restore Snapshot dialog box:

Parameter name	Description
Target Database Name	The name of the target database where the snapshot is to be restored.
Target Environment Name	The name of the target environment where the snapshot is to be restored.

6. Click the Restore button.

Results

The snapshot is restored for the target database and environment.

Note: You can also use the CDP CLI to restore a snapshot. For more information, see *restore-snapshot*.

Related Information

restore-snapshot

Deleting a snapshot

Cloudera Operational Database allows you to delete a snapshot from the location where the snapshot is exported.

Before you begin

You must be logged into the Cloudera Operational Database as an administrator.

Procedure

1. Log in to the Cloudera Operational Database web interface.
2. Find and select the database for which you want to delete a snapshot.
3. Navigate to the Snapshots tab on the Database Manager page.
4. Click the  icon for a snapshot and select the Delete Snapshot action from the list of actions.
5. Click the Ok button in the Confirm dialog box.

Results

The snapshot is deleted from the object store location.

Note: You can also use the CDP CLI to delete a snapshot. For more information, see *delete-snapshot*.

Related Information

delete-snapshot

View Instance Types in Cloudera Operational Database

Cloudera Operational Database provides a comprehensive Instances Overview page where you can efficiently view the available instance types for their deployments. Viewing the instance types is crucial for understanding the resources allocated to your database and for making informed decisions regarding scaling and performance.

Filter Instance Types

The **Instances Overview** page in Instances displays the instance types that meet the Cloudera Operational Database requirements. The platform offers robust filtering capabilities. You can filter instances based on the following criteria:

- Architecture: Filter by the underlying processor architecture, for example, x86_64 or ARM64.
- Scale Type: Filter by the intended scaling behavior of the instance, for example, heavy or light.
- Storage Type: Filter by the storage type the instances use, for example, Cloud or HDFS.
- Instance Group: Filter by the logical group of instances for easier management and identification within your deployments, for example, Master or Worker.

Supported Cloud Providers

The Cloudera Operational Database is designed to be cloud-agnostic, allowing you to deploy your instances wherever you choose. The following cloud providers are supported for these instance types:

- Amazon Web Services (AWS)
- Microsoft Azure
- Google Cloud Platform (GCP)