

New CSOs and CSCs

What makes a CSO?

Choose Manage CSO from the drop-down. This opens up a form with the following details:

- **SQL:** Any user defined SQL which returns a result set.
- **Key Columns:** CSOs work with a result set which has unique rows. A combination of one or more columns of the result set can be made as a key column as long as this key column identifies a unique row in the result set.
- **Server(s):** Comma separated names of the servers for which this SQL needs to be queried every Collection Interval.
- **Data Collection Interval:** Interval in which this SQL is queried periodically. We recommend five minutes which also happens to be the default value.
- **Purging Interval:** The data retention time & we recommend seven days.

MANAGE CUSTOM SQL OBJECTS

Cluster_Data_Free

Cluster_Nodes

Cluster_RedoBuffer

Cluster_RedoLogspace

Data_Types

Database_Size

DiskInfo

FullText_Index

Host_Hitting_by_File_io

Host_Hitting_by_Tablescans

Non-InnoDB_Tables_Count

Object_accessed_the_most

Percona_Active_Tables

Percona_Unused_Indexes

Performance_Schema_Events

Primary_Key_Ratio

Schema_Redundant_Index

Storage_Engine

Table_InnoDB_Buffer_Pool

Name*

Cluster_Data_Free

Name of the Custom SQL object.

Enabled?

☐ Yes ☒ No

Select "Yes" to have SQL Diagnostic Manager evaluate this Monitor and display the output on the Monitors page.

SQL Query*

```
/* Requirement : MySQL Cluster v7.1.3
This query will return percentage of free data memory */

SELECT
  @total_data_memory :=
  (SELECT
    SUM(total) AS `Total_Memory`
  FROM
    ndbinfo.memoryusage
  WHERE memory_type = 'Data memory') AS
  `Total_Data_Memory`,
  @used_data_memory :=
```

The MySQL query that defines this Custom SQL Object

Key Columns*

Used_Data_Memory

A column or a combination of columns that uniquely identifies a row in the result set.

Making its CSC

We create a CSC like any other monitor. Go to monitors page and select **Add new monitor** from the drop-down

- Enter the name of the counter being added.
- Type in the name of the group to which this counter is being added.
- Choose the type of counter as Custom SQL.

- **Formula:** A MySQL server parameter that is needed to compute the value of this counter.
- **Value:** This defines a function that computes the value. Below, you can find a template:

```
function() {
  var sqlObject = MONyog.UserObject('<Name of your Custom SQL Object>');
  if (!sqlObject || !sqlObject.isEnabled() || !MONyog.MySQL.Custom.Available)
    return '(n/a)';
  /* You will have to call select here to fetch the resultset. */
  var resultSet = sqlObject.select();
  var results = ''; /* results holds the resultset in the form of array of row(s).*/
  /*Get column(s) for each row from the result set */
  for (i in resultSet) {
    if (resultSet.length > 0)
      results += '<br>';
    results += resultSet[i].<Column name in resultset> +
      '.' + resultSet[i].<Column name in resultset>;
  }
  if (results.length == 0)
    results = 'None';
  return results;
}
```

- **Description:** Description of Monitor/Advisor.
- **Advice Text:** Advise text to the Monitor/Advisor being added.