**PA5 – Intro to Google Cloud**

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**Input Files:**

|  |  |  |
| --- | --- | --- |
| **File Name** | **Rows** | **Size** |
| Weather10K.csv | 10,000 | 969 KB |
| Weather25K.csv | 25,000 | 2.40 MB |
| Weather100K.csv | 100,000 | 9.26 MB |

**Network Connection:**

|  |  |
| --- | --- |
| **Download Speed** | **Upload Speed** |
| 12.24 Mbps | 5.11 Mbps |

**Google Cloud Storage:**

File Transfer between local and google cloud storage is done using gsutil commands. Virtualbox Linux was used for gsutil since it is ore compatible for shell commands. Codes are written in .sh file and given below are the time details. (Screenshots are attached)

**To Upload:**

|  |  |
| --- | --- |
| **File Name** | **Time Taken (seconds)** |
| Weather10K.csv | 3 seconds |
| Weather25K.csv | 5 seconds |
| Weather100K.csv | 8 seconds |

**To Download:**

|  |  |
| --- | --- |
| **File Name** | **Time Taken (seconds)** |
| Weather10K.csv | 11 seconds |
| Weather25K.csv | 31 seconds |
| Weather100K.csv | 35 seconds |

**Google Cloud SQL:**

MySQL Workbench is used to establish a connection to the Cloud SQL database, and the CSV files are inserted directly to the database. Queries are written in .sql file and given below are the time details: (Screenshots attached)

**To Create Table:**

|  |  |
| --- | --- |
| **DB Name** | **Time Taken (seconds)** |
| Weather\_10K | 0.532 seconds |
| Weather\_25K | 0.594 seconds |
| Weather\_100K | 0.406 seconds |

**To Store Data:**

|  |  |
| --- | --- |
| **File Name** | **Time Taken (seconds)** |
| Weather10K.csv | 2.563 seconds |
| Weather25K.csv | 5.218 seconds |
| Weather100K.csv | 40.453 seconds |

**To Retrieve Data:**

|  |  |
| --- | --- |
| **File Name** | **Time Taken (seconds)** |
| Weather10K.csv | 1.875 seconds |
| Weather25K.csv | 1.375 seconds |
| Weather100K.csv | 4.750 seconds |