

N'osairis Technology

Software Engineer Assessment

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Github: <https://github.com/arhamrizvi/Ping-Report-System> (Code & other docs)

This assessment is divided into 2 parts:

1. MySQL
2. Python Web Application (Made using Flask Framework)

1. MySQL

The Database (terminals) and Table (data_terminals) are created in MySQL Workbench and the Create Script can be found in the github link attached below:

<https://github.com/arhamrizvi/Ping-Report-System>

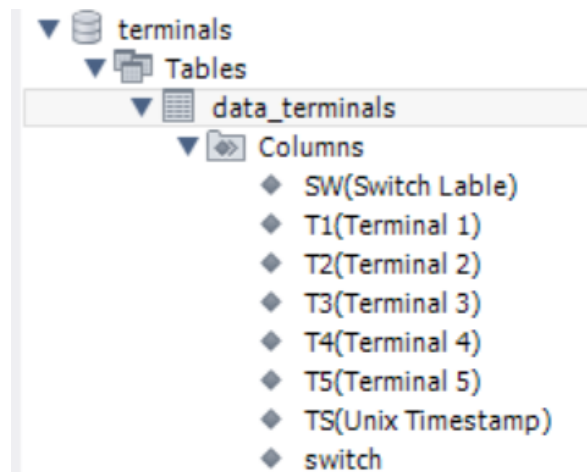


Figure 1.0 : Create Database, Table

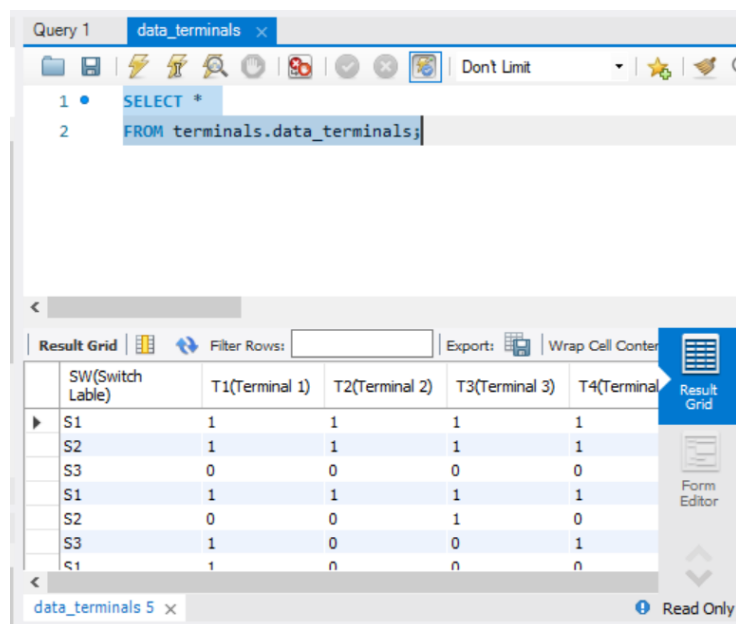


Figure 1.1: Importing the csv data into the table

2. Python Web Application

Technology used: **Flask** Framework, **bokeh** (for charts), **pandas** for data manipulation, **HTML**, **CSS**, **JavaScript**

The ping report is divided into 2 parts:

1. Charts on a span of 12 hours describing where Ping Availability of the 3 switches
2. Alert page to report the pings that were lost

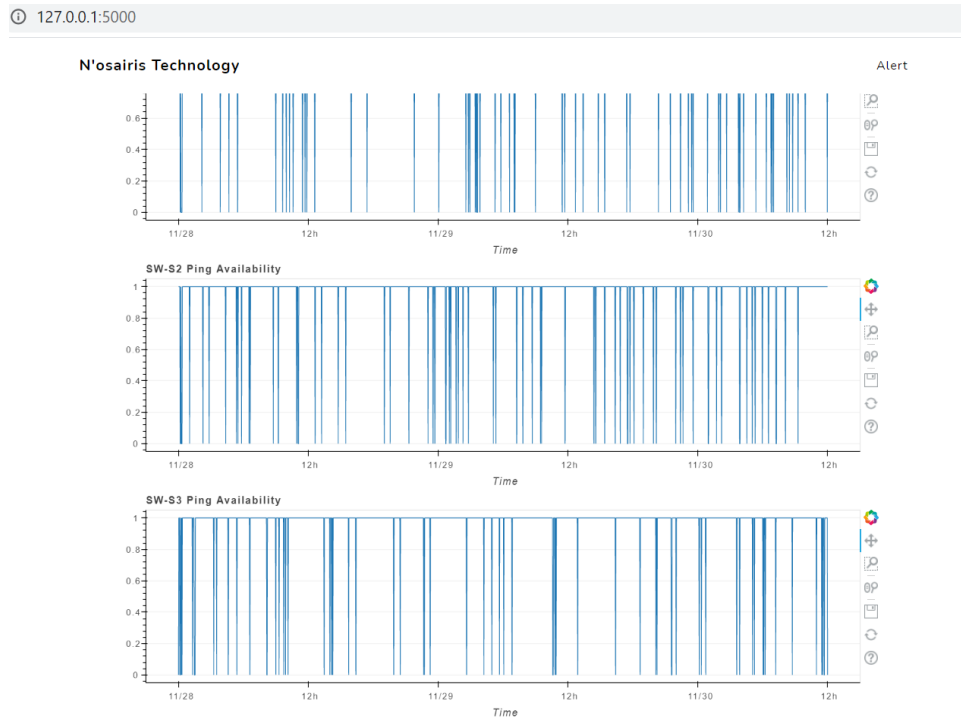


Figure 2.0: Ping Availability Screen

The screenshot displays the 'Alert Information' page. The browser address bar shows '127.0.0.1:5000/alert'. The page title is 'Alert Information'. Below the title is a table with the following columns: 'No', 'SW(Switch Label)', 'TS(Unix Timestamp)', and 'Alert Type'. The table contains 29 rows of data, each representing a lost ping event. The 'No' column ranges from 2 to 296. The 'SW(Switch Label)' column shows switch identifiers like S3, S1, S2, and S3. The 'TS(Unix Timestamp)' column shows timestamps in YYYY-MM-DD HH:MM:SS format. The 'Alert Type' column consistently shows 'Ping Lost'.

No	SW(Switch Label)	TS(Unix Timestamp)	Alert Type
2	0 S3	2019-11-28 00:00:00	Ping Lost
14	1 S3	2019-11-28 00:08:00	Ping Lost
15	2 S1	2019-11-28 00:10:00	Ping Lost
16	3 S2	2019-11-28 00:10:00	Ping Lost
17	4 S3	2019-11-28 00:10:00	Ping Lost
19	5 S2	2019-11-28 00:12:00	Ping Lost
21	6 S1	2019-11-28 00:14:00	Ping Lost
24	7 S1	2019-11-28 00:16:00	Ping Lost
25	8 S2	2019-11-28 00:16:00	Ping Lost
26	9 S3	2019-11-28 00:16:00	Ping Lost
27	10 S1	2019-11-28 00:18:00	Ping Lost
28	11 S2	2019-11-28 00:18:00	Ping Lost
30	12 S1	2019-11-28 00:20:00	Ping Lost
31	13 S2	2019-11-28 00:20:00	Ping Lost
32	14 S3	2019-11-28 00:20:00	Ping Lost
94	15 S2	2019-11-28 01:02:00	Ping Lost
119	16 S3	2019-11-28 01:18:00	Ping Lost
134	17 S3	2019-11-28 01:28:00	Ping Lost
137	18 S3	2019-11-28 01:30:00	Ping Lost
140	19 S3	2019-11-28 01:32:00	Ping Lost
195	20 S1	2019-11-28 02:10:00	Ping Lost
205	21 S2	2019-11-28 02:16:00	Ping Lost
256	22 S2	2019-11-28 02:50:00	Ping Lost
296	23 S3	2019-11-28 03:16:00	Ping Lost

Figure 2.1: Alert Report