SAS Viya Performance Testing Log

Comparing **SAS Enterprise Guide 8.5** to **SAS Studio (Web)**

Environment

- **Server**: Stage Viya (PD1)
- **Libraries Examined**: `MASTER`, `NACRS`
- **Focus**: Library access latency and table open speed
- **Tools**: Manual stopwatch + `%sysfunc(datetime())` with `obs=1`

1. Informal Observations (Manual Timing)

These were conducted to gauge general latency and connection reliability.

SAS Enterprise Guide 8.5

MASTER Library

- Library open: ~20 sec
- `D_GEOGRAPHY`: ~20 sec
- `D_POSTAL_CENSUS`: ~10 sec

NACRS Library

- Library open: ~25 sec
- `NACRS2223Q4`: ~65 sec
- `NACRS0809_CACS2012_CIHI`: ~10 sec
- `NACRS2324Q4_AUG`: ~73 sec (data view ~50 sec)
- `NACRS2425Q1`: ~60 sec
- `NACRS2425Q2`: ~67 sec

> !!! Occasionally encountered:
> *"The connection to 'Stage Viya' has been lost..."*

SAS Studio (Web)

MASTER Library

- Library open: 10 sec
- `D_GEOGRAPHY` : 13 sec
- `D_POSTAL_CENSUS` : 12 sec

NACRS Library

- Library open: 10 sec
- `NACRS2223Q4` : 10 sec
- `NACRS0809_CACS2012_CIHI` : 11 sec
- `NACRS2324Q4_AUG` : 11 sec
- `NACRS2425Q1` : 11 sec
- `NACRS2425Q2` : 11 sec

2. Formal Timing Tests (Programmatic)

Tests used `%sysfunc(datetime())` to log time to retrieve 1 record per table.

Example SAS Code Snippet

```
%let start = %sysfunc(datetime());
proc sql;
    select * from NACRS.NACRS2223Q4 (obs=1);
quit;
%let end = %sysfunc(datetime());
%let elapsed = %sysevalf(&end - &start);
%put NOTE: Time to open NACRS2223Q4 = &elapsed seconds;
```

3. Programmatic Timing Results

SAS Enterprise Guide 8.5

Table	Time (s)

Table	Time (s)
MASTER library open	80.77
D_GEOGRAPHY	5.14
D_POSTAL_CENSUS	5.79
NACRS library open	19.47
NACRS2223Q4	21.17
NACRS0809_CACS2012_CIHI	11.21
NACRS2324Q4_AUG	15.57
NACRS2425Q1	6.25
NACRS2425Q2	4.24

SAS Studio (Web)

Table	Time (s)
MASTER library open	41.18
D_GEOGRAPHY	0.63
D_POSTAL_CENSUS	0.64
NACRS library open	14.77
NACRS2223Q4	0.28
NACRS0809_CACS2012_CIHI	0.04
NACRS2324Q4_AUG	0.29
NACRS2425Q1	0.27
NACRS2425Q2	0.27

4. Timing Statistics (Comparison)

MASTER Library — Table Access

Tool	Mean (s)	Median (s)	Mode (s)	Std. Dev (s)	Variance (s²)
EG 8.5	5.46	5.46	5.14 / 5.79	0.32	0.10

Tool	Mean (s)	Median (s)	Mode (s)	Std. Dev (s)	Variance (s²)
SAS Studio	0.63	0.63	0.63	0.009	0.00008

NACRS Library — Table Access

Tool	Mean (s)	Median (s)	Mode (s)	Std. Dev (s)	Variance (s²)
EG 8.5	11.69	11.21	—	6.76	45.74
SAS Studio	0.23	0.27	0.04	0.11	0.012

Notes on Statistical Interpretation

- **Mean**: Average time taken to access each table
- **Median**: Middle value, less affected by outliers
- **Mode**: Most frequently occurring timing (where applicable)
- **Standard Deviation**: Measures variation from the mean; lower values imply consistency
- **Variance**: Square of the standard deviation; reflects timing spread

5. Conclusion

Across both informal and formal performance testing on the Stage Viya (PD1) server, **SAS Studio (Web)** consistently outperformed **SAS Enterprise Guide 8.5**, especially for individual table access.

The formal timing tests using `obs=1` queries show significant reduction in load times across all concerned data sources, especially in the `NACRS` library.

6. Methodology & Code Style

- **Timer Used**: `%sysfunc(datetime())` before/after access.
- **Access Type**: `proc sql` with `(obs=1)` for lightweight query testing.
- **Environment**: Staging Viya PD1; both tools connected to same libraries.
- **Format**: Markdown written by Alexander He Meng, May 2025
- **Tools**: SAS Enterprise Guide 8.5 (32-bit), SAS Studio (web interface)

This benchmark-style test aims to provide an objective, script-backed snapshot of real-world performance behavior.