



Health Canada and the Public
Health Agency of Canada

Santé Canada et l'Agence
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Canada

SAS GRID 9.4

WHAT HAS CHANGED?



Agenda

- Review Paths, Partitions, Storage
- Function/Code enhancements
- Planned Grid Maintenance
- Data Management
- Performance Improvements
- Data Transfer (SAMBA)
- DAIS/DEXA
- Post Migration Expectations

Review Paths, Partitions, Storage

- Partitions
 - Partitions by shared folder (business line) with the exception of DCAP and DIAS. Each partition gets the same amount of space that they had on the 9.3 grid plus 40% more for their initial amount of space on the new 9.4 grid.
 - When space starts to become limited for each partition clients should look to clean up their allotted space.
- Paths
 - Paths have been changed from the SAS 9.3 environment to the SAS 9.4 environment. In the SAS 9.3 environment, folders could be accessed by either using /sas_data/ or /sas/sasusers/ but in the SAS 9.4 environment folders can now be accessed by /appdata..
 - For more information of the changes that were made please refer to the following link: http://www.gcpcedia.gc.ca/wiki/SAS_9.3_VS_SAS_9.4

Review Paths, Partitions, Storage

- Storage can grow
 - Investigating:
 - Method to track available space in group partition
 - Notifying custodians when a certain % of storage use is reached for their partition
 - Requesting additional storage be added in consequence

Function/Code enhancements

- Given this is the first upgrade/change to the SAS Grid in quite some time, there are numerous code enhancements and changes.
- Pertinent details of what is new up to SAS 9.4**M5** can be found here (The grid is not on M6 yet and any changes related to M6 can be ignored for now):
 - [What's New in SAS 9.4](#)
 - [SAS® 9.4 Functions and CALL Routines: Reference, Fifth Edition](#)

Planned Grid Maintenance

- Due to instabilities, the SAS 9.3 Grid didn't have planned maintenance windows to avoid changes that could further impact the Grid availability
- With a new SAS 9.4 Grid, the expectation is to have, when required, patching performed at the OS level as well as at the application level
 - This will lead to planned and advertised service outages
 - Frequency of patching to be determined – objective is not more than twice per quarter
 - Security patches are not included in the targeted frequency as they usually require quicker action

Data Management

- With the new SAS 9.4 Grid the expectation will be to implement data management best practices
 - Directory structures
 - Reduction in duplication of data
 - User access to data

Performance Improvements

- With the SAS 9.3 Grid, performance was reduced to increase stability.
- With SAS 9.4 we expect a removal of such constraints on performance and expect an improvement in time to execute jobs
- We will be providing users a best practice document which will describe how to configure SAS EG7.1 to optimize execution time for longer jobs.
- Partitions by business lines will limit all groups being impacted by low disk space – managed by business line.

Data Transfer (SAMBA)

- SAMBA is not an acceptable solution to transfer files from mapped drives directly to SAS Grid (SAMBA, as it is now, is a security risk)
- Investigation into alternate acceptable applications is ongoing
- Workaround:
 - Use of Filezilla to SFTP the files from mapped drive to users' workstation (to potentially code protected external drive) and then onto SAS Grid.

DAIS/DEXA

- Data from Legacy platforms will be migrated to the 9.4 SAS Grid
 - Timelines on data migration still being determined
 - DAIS is planning an iterative migration over the next year
 - Users from these systems will have a need to revisit their data management approach
 - As a team, documenting how to handle the new approaches may be useful

Post Migration Expectations

- M6 Upgrade
 - Addresses issue with PROC IMPORT dropping the time portion of a date time value
- Hot Fix
 - With Flash support discontinued, this Hot Fix facilitates a move to HTML5
 - M6 Upgrade needs to happen to apply this fix
- Visual Analytics (VA)
 - Early introduction planned post-migration (Fall timeline)
 - VA on SAS 9.4 works with Flash only
 - VA on VIYA works with HTML5