



Controlling automatic TTreeCache creation

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ROOT I/O Workshop #6, 24/3/2014



Overview

- Add configuration option to globally control setup of TTreeCaches for TTrees
 - Can use the option to enable automatic setup of TTreeCache for every TTree
 - Expected that eventually the default will be to create caches, then configuration option can be used to disable
 - The automatic creation is similar to adding SetCacheSize() on each tree
- Special considerations
 - if the user already uses SetCacheSize() don't override it.
 - if a cache is transferred to a new TTree with SetCacheRead() calls, don't necessarily automatically (re)create a new one. (TChain moves the cache in this way)
- Configuration is either by shell variable or ROOT resource variable. The shell variable (e.g. unix environment variable) overrides the ROOT resource variable.
 - ROOT_TTREETCACHE_SIZE (or TTreeCache.Size)
 - ROOT_TTREETCACHE_PREFILL (or TTreeCache.Prefill)
- ROOT_TTREETCACHE_SIZE is the size of the TTreeCache to automatically create. The unit is multiples of the estimated clustersize, based on the AutoFlush value and size per entry. Setting of 1.5 would be equivalent to SetCacheSize(-1).
- ROOT_TTREETCACHE_PREFILL controls the learn prefill option on new TTreeCaches. Possible values are 0 (kNoPrefill) or 1 (kAllBranches).

Status

- Have made a patch and been through one revision, so two cycles of:
 - Comments from Philippe
 - Discussion between us arising from patch or issues noticed during development
 - Plus other feedback, e.g.
 - After brief explanation on ATLAS distrib. IO list
- At least one more revision needed