

CacheRefresh: Copy data		U
CacheRefresh: Mark cache key as active	U	
CacheClear: Mark cache for the key as cleared		U
CacheClear: Garbage collection	D D D	
CacheClear: Delete the data		D

Legend:

U - Update/Insert

D - Delete

Cache Lifecycle

Refresh

- Cache can be refreshed either on demand (user clicks the Refresh button, SQL query that depends on cached view) or by schedule (trigger).
- Schedule based cache refreshes are implemented with triggers. Triggers fire at the schedule and the trigger invokes cache refresh procedures in order to do cache refreshes.
- Even if cache refresh is schedule (trigger) based and if it has never been refreshed and if a user request comes in either for cached view or if user asks for a refresh, the cache will be refreshed.

Clear

- Cache can be cleared either by user demand or by expiration policy.
- Cache clear happens in two stages a) mark data as cleared in the status table and b) Garbage Collection: delete entries for cleared data from the status table and delete data from the target table.

Cache Garbage Collection Impacts

- In a cluster, due to cluster split, sometimes data might be deleted that is used by other members. "garbageCollectionDelaySeconds" is the configuration parameter designed to handle this.
- If procedure caching is used and if there are a significant number of variants which are constantly refreshed, then Garbage Collection might consume significant CPU and memory. There are a couple of parameters to control this a) debug/maxConcurrentCacheGarbageCollectionJobs or debug/delayBetweenCacheGarbageCollectionJobs and b) debug/disableCacheOrphanGarbageCollection.

Cache Ownership

Each instance of a cache is owned by a cluster (if the Active Cluster is present), otherwise by a server instance (if serverid is present).