Short-term hot bins compete in its partition

(a)

(b)

Evict to HD

Cache

Extra Bins
Cache

PrevCachedBins

GlobalBinCount

Long-term hot bins compete

PrevPrvBins

TopGlobalBins

Evict to MD

Overlapping with PrevCachedBins

GlobalBinCount
Public Zone

[588x999] Lower Priority

Evict to HD

[423x470] Higher Priority

Evict Bins

Private Zone

VM1

Hot

Extra Bins

VM2

Hot

Cold

Extra Bins

VM1

Cold

Extra Bins

VM2

Cold

Extra Bins

VM1

Hot

Hot

Extra Bins

Extra Bins

Private Zone

Lower Priority

Public Zone

Extra Bins

(b)
Long-term hot bins compete in Private Zone

Short-term hot bins compete in Public Zone

- Store top bins of EvictBins and PrevPubBins in the remaining space of Public Zone.
- Evict victims to HD.
1. Bursty Case

Use QualifiedHotBinsWorksetSize to guide the PublicZoneSize.

2. Non-Bursty Case

Use RecentEpochHitVolumnSize to guide the PublicZoneSize.