

Q (/searchresults)

(/myaccount/notifications)



Sandpiper (/spaces/127/sandpiper) ➤ Discussions (...

Private Space · Technology Standards (/spaces/9/technology-standards/technologyhome)

(/spaces/127/sandpiper)

Activity Stream (/spaces/127/sandpiper/?act=1)

People (/spaces/127/sandpiper/people)

Content ▼

:

Posted in: Development (/spaces/127/sandpiper/forums/5366/development)

Hash Calculation Now Includes Slice Metadata

■ Unsubscribe from this discussion

3 Subscribe to RSS (../../../../spaces-cf/forums/rss-space-posts.ashx? spaceID=127&topicID=5986&forumID=5366&key=rrer%2B1xDo%2BlxpC7jBRbM5w%3D%3D)



Doug Winsby (https://autocare.communifire.com/people/dougwinsby) 5/31/2020

The first design of the hash function which creates a sha1 value based on Slice content did not include slice_metadata. My original thinking was that no grain changes meant no reason to sync.

After some thought, however, I've decided that slice_metadata is content and so should be included in the hash.

This means that a simple update of a reference date would be synced up. (We hope no publisher would do that, though!).

For those interested, here is the (altered) code to perform the hash:

```
// HashSlice returns a shal hash of all metadata and grains in a slice
func HashSlice(db orm.DB, sliceID uuid.UUID) (string, int, error) {
 var (
 ids □uuid.UUID
       bytes.Buffer
 meta sandpiper.MetaArray
 var hash = func(meta sandpiper.MetaArray, ids []uuid.UUID) string {
 if len(meta) == 0 && len(ids) == 0 {
  return ""
  }
  for _, u := range ids {
  b.Write(u[:])
  }
  for _, m := range meta {
  b.WriteString(m.Key)
  b.WriteString(m.Value)
 }
 return fmt.Sprintf("%x", sha1.Sum(b.Bytes()))
 // get slice metadata (sorted!)
 if err := db.Model(&meta).
 Where("slice_id = ?", sliceID).
 Order("key").
 Select(); err != nil {
  return "", 0, err
 }
 // get grain ids for the slice (sorted!)
 if err := db.Model().Table("grains").Column("id").
 Where("slice_id = ?", sliceID).
 Order("id").
  Select(&ids); err != nil {
 return "", 0, err
 }
 return hash(meta, ids), len(ids), nil
}
```

hash (/spaces/127/sandpiper/searchresults?keyword=%22hash%22&searchtags=1) sync (/spaces/127/sandpiper/searchresults?keyword=%22sync%22&searchtags=1)

▲ Like

Reply (/forums/post?tid=5986&ReplyPostID=5987&SpaceID=127)

 $\label{eq:copyright} \ @\ 2021\ Axero\ Solutions\ LLC.$ Auto Care Association powered by Communifire $^{\text{\tiny TM}}\ Version\ 8.0.7789.8960$

© 2021 - AUTO CARE ASSOCIATION (http://autocare.org) | LEGAL & PRIVACY STATEMENT (https://www.autocare.org/privacy-statement/)