

RowKey Design

Instead of using the original business ID as the RowKey directly, we prefix it with a 2-digit number. This prefix is derived from the hash code of the original RowKey to distribute the rows evenly across the 10 regions.

The RowKey design follows the format:

```
<2-digit prefix>|<original business ID>
```

Java code for generating the new RowKey:

```
String originalKey = columns[ROW_KEY_INDEX];
int prefix = Math.abs(originalKey.hashCode()) % 10;
String rowKey = String.format("%02d|%s", prefix, originalKey);
```

The hash code technique ensures that each business ID gets assigned to one of the 10 prefixes. By pre-splitting the table into 10 regions based on these prefixes, we ensure an even distribution of data across regions.

A screenshot of the read/write requests count from the Master UI shows that the data and requests are evenly distributed across all the regions.

Table Regions

Name[10]	Region Server	ReadRequests (8)	WriteRequests (174,567)	StoreFileSize (0 B)	Num.Stores[15]	MemSize (22 MB)	Locality	Start Key	End Key
business_1696744051903.ab5eb3ade33f5c5de4384bc203b666.	wn0-cloud.nyenyofvcjparkupd51rnhg2t.bx.internal.cloudapp.net:16030	0	17,621	0 B	0	23 MB	0.0		01
business_01.1696744051903.390ba387a26af99ec27d7900da03de.	wn1-cloud.nyenyofvcjparkupd51rnhg2t.bx.internal.cloudapp.net:16030	0	17,423	0 B	0	22 MB	0.0	01	02
business_02.1696744051903.f96e6772aacdb6b8252580e4ffaf5d97.	wn1-cloud.nyenyofvcjparkupd51rnhg2t.bx.internal.cloudapp.net:16030	0	17,718	0 B	0	23 MB	0.0	02	03
business_03.1696744051903.a89b21c99c3ab992ecde046779068435.	wn0-cloud.nyenyofvcjparkupd51rnhg2t.bx.internal.cloudapp.net:16030	0	17,286	0 B	0	22 MB	0.0	03	04
business_04.1696744051903.cdb311291c13ef5ade03a3a4799a21.	wn0-cloud.nyenyofvcjparkupd51rnhg2t.bx.internal.cloudapp.net:16030	0	17,401	0 B	0	22 MB	0.0	04	05
business_05.1696744051903.6dc7948c1b50253a2e49a1c7252aa05.	wn1-cloud.nyenyofvcjparkupd51rnhg2t.bx.internal.cloudapp.net:16030	0	17,528	0 B	0	22 MB	0.0	05	06
business_06.1696744051903.8612d9712a19a8653371947a533df.	wn0-cloud.nyenyofvcjparkupd51rnhg2t.bx.internal.cloudapp.net:16030	0	17,462	0 B	0	22 MB	0.0	06	07
business_07.1696744051903.148943d848249b4d59898eefbaced14.	wn1-cloud.nyenyofvcjparkupd51rnhg2t.bx.internal.cloudapp.net:16030	0	17,403	0 B	0	22 MB	0.0	07	08
business_08.1696744051903.694c274a0070e6bd1d6e59f322b27494.	wn0-cloud.nyenyofvcjparkupd51rnhg2t.bx.internal.cloudapp.net:16030	0	17,306	0 B	0	22 MB	0.0	08	09
business_09.1696744051903.c0960a0b99052962190aa871a24c03a4.	wn1-cloud.nyenyofvcjparkupd51rnhg2t.bx.internal.cloudapp.net:16030	0	17,419	0 B	0	22 MB	0.0	09	