

root@sandbox-hdp:~ - Shell In A

Not secure | 192.168.239.133:4200

Apps YouTube Gmail Google Drive

Other bookmarks Reading list

```
sandbox-hdp login: root
root@sandbox-hdp.hortonworks.com's password:
Last login: Thu Dec  9 02:39:59 2021
[root@sandbox-hdp ~]# hbase shell
HBase Shell
Use "help" to get list of supported commands.
Use "exit" to quit this interactive shell.
Version 2.0.0.3.0.1.0-187, re9fcf450949102de5069b257a6d
Took 0.0014 seconds
hbase(main):001:0>
```

Windows taskbar icons: Start, Search, Task View, File Explorer, Mail, L, Spotify, Prime Video, Chrome, Brave, Opera, WhatsApp, Facebook, Messenger, Instagram, VLC, Docker, Notepad.

System tray: Network, Volume, 10:35 PM 08-Dec-21

*New Text Document (2) - Notepad

File Edit Format View Help

Student Name = Bibek Shah Shankhar

1. Starting Hbase shell in hortonworks.

Ln 3, Col 40 160% Windows (CRLF) UTF-8

root@sandbox-hd | hbase_commands_ | Hortonworks Sand | +

Not secure | 192.168.239.135:4200

Apps YouTube Gmail Google Drive myHomepage | my... Other bookmarks Reading list

```
hbase(main):002:0> create 'test', { NAME => 'cf', VERSIONS => 5 }
0 row(s) in 2.2570 seconds

=> Hbase::Table - test
hbase(main):003:0> 
```

Windows taskbar icons: Start, Search, Task View, File Explorer, Mail, L, Spotify, Prime Video, Chrome, Discord, Firefox, WhatsApp, Facebook, Messenger, Instagram, Notepad, Photos, OneDrive.

System tray: 11:20 PM, 08-Dec-21

*New Text Document (2) - Notepad

File Edit Format View Help

Student Name = Bibek Shah Shankhar

1. Create table in Hbase

Ln 15, Col 1 | 160% | Windows (CRLF) | UTF-8

root@sandbox-hd | hbase_commands_ | Hortonworks Sand | +

Not secure | 192.168.239.135:4200

Apps | YouTube | Gmail | Google Drive | myHomepage | my... | Other bookmarks | Reading list

```
hbase(main):003:0> put 'test', 'row1', 'cf:a', 'value1'
0 row(s) in 0.7540 seconds

hbase(main):004:0> put 'test', 'row2', 'cf:b', 'value2'
0 row(s) in 0.0090 seconds

hbase(main):005:0> put 'test', 'row3', 'cf:c', 'value3'
0 row(s) in 0.6200 seconds

hbase(main):006:0> put 'test', 'row4', 'cf:d', 'value4', 1
0 row(s) in 0.0090 seconds

hbase(main):007:0> put 'test', 'row4', 'cf:d', 'value5', 2
0 row(s) in 0.0880 seconds

hbase(main):008:0> put 'test', 'row4', 'cf:d', 'value6', 3
0 row(s) in 0.0070 seconds

hbase(main):009:0> █
```

Windows taskbar: Windows logo, Search, Task View, Edge, File Explorer, Mail, L, Spotify, Prime Video, Chrome, Discord, Firefox, WhatsApp, Facebook, Messenger, Instagram, Notepad, Photos, OneDrive.

System tray: 11:22 PM, 08-Dec-21

*New Text Document (2) - Notepad

File Edit Format View Help

2. Insert/Update data in HBase

Ln 15, Col 1 | 160% | Windows (CRLF) | UTF-8


```
root@sandbox-hd | hbase_commands | Hortonworks Sand | +
Not secure | 192.168.239.135:4200
Apps YouTube Gmail Google Drive myHomepage | my... Other bookmarks Reading list

hbase(main):009:0> scan 'test'
ROW COLUMN+CELL
row1 column=cf:a, timestamp=1633788657731, value=value1
row2 column=cf:b, timestamp=1633788673150, value=value2
row3 column=cf:c, timestamp=1633788685687, value=value3
row4 column=cf:d, timestamp=3, value=value6
4 row(s) in 0.0360 seconds

hbase(main):010:0> get 'test', 'row1', {COLUMNS => 'cf:a'}
COLUMN CELL
cf:a timestamp=1633788657731, value=value1
1 row(s) in 0.0710 seconds

hbase(main):011:0> get 'test','row4',{COLUMNS =>'cf:d',TIMESTAMP=>1633788685687}
COLUMN CELL
0 row(s) in 0.0090 seconds

hbase(main):012:0> get 'test','row4',{COLUMNS =>'cf:c',TIMESTAMP=>1633788685687}
COLUMN CELL
0 row(s) in 0.0040 seconds

hbase(main):013:0> get 'test','row3',{COLUMNS =>'cf:c',TIMESTAMP=>1633788685687}
COLUMN CELL
cf:c timestamp=1633788685687, value=value3
1 row(s) in 0.0050 seconds

hbase(main):014:0>
```

*New Text Document (2) - Notepad

File Edit Format View Help

BIBEK SHAH SHANKHAR

3. Read Data FROM HBASE

Ln 29, Col 1 160% Windows (CRLF) UTF-8



root@sandbox-hd | hbase_commands | Hortonworks Sand | +

Not secure | 192.168.239.135:4200

Apps YouTube Gmail Google Drive myHomepage | my... Other bookmarks Reading list

```
hbase(main):015:0> list
TABLE
ATLAS_ENTITY_AUDIT_EVENTS
atlas_titan
character
test
4 row(s) in 0.0060 seconds

=> ["ATLAS_ENTITY_AUDIT_EVENTS", "atlas_titan", "character", "test"]
hbase(main):016:0> list 't.*'
TABLE
test
1 row(s) in 0.0050 seconds

=> ["test"]
hbase(main):017:0>
```

Windows taskbar: Windows Start, Search, Task View, File Explorer, Edge, Mail, L, Spotify, Prime Video, Chrome, Discord, Firefox, WhatsApp, Facebook, Messenger, Instagram, Notepad, Photos, OneDrive.

System tray: 11:29 PM 08-Dec-21

*New Text Document (2) - Notepad

File Edit Format View Help

Bibek Shah Shankhar

4. List Data in Hbase

Ln 39, Col 22 | 160% | Windows (CRLF) | UTF-8

```
root@sandbox-hd | hbase_commands_ | Hortonworks Sand | +
Not secure | 192.168.239.135:4200
Apps YouTube Gmail Google Drive myHomepage | my... » Other bookmarks Reading list

hbase(main):018:0> delete 'test','row1', 'cf:a'
0 row(s) in 0.0720 seconds

hbase(main):019:0> scan 'test'
ROW COLUMN+CELL
row2 column=cf:b, timestamp=1633788673150, value=value2
row3 column=cf:c, timestamp=1633788685687, value=value3
row4 column=cf:d, timestamp=3, value=value6
3 row(s) in 0.4720 seconds

hbase(main):020:0> delete 'test','row2', 'cf:b'
0 row(s) in 0.0510 seconds

hbase(main):021:0> scan 'test'
ROW COLUMN+CELL
row3 column=cf:c, timestamp=1633788685687, value=value3
row4 column=cf:d, timestamp=3, value=value6
2 row(s) in 0.0090 seconds

hbase(main):022:0>
```

*New Text Document (2) - Notepad

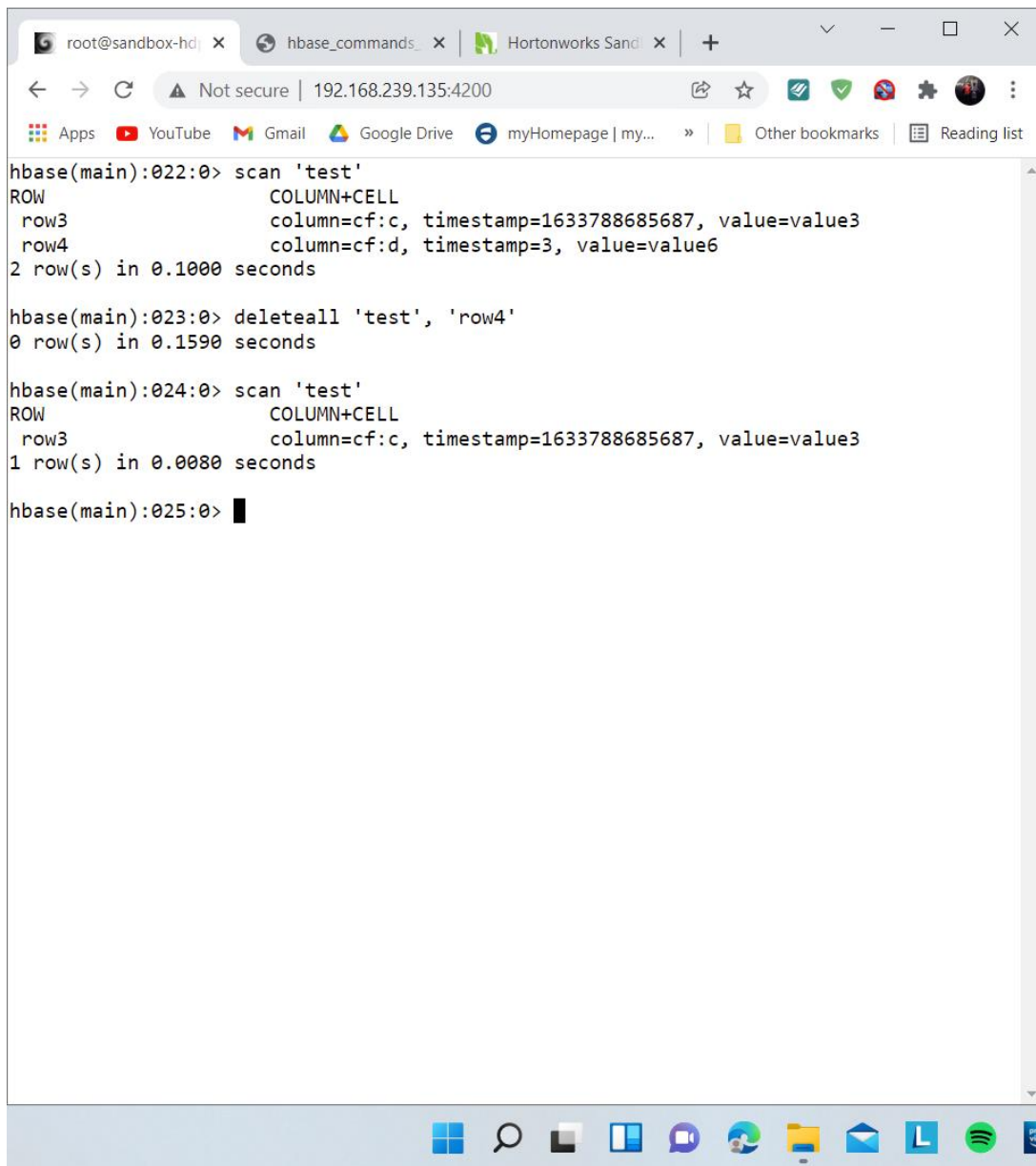
File Edit Format View Help

Bibek Shah Shankhar

5. Delete Data From Hbase

Ln 46, Col 1 160% Windows (CRLF) UTF-8



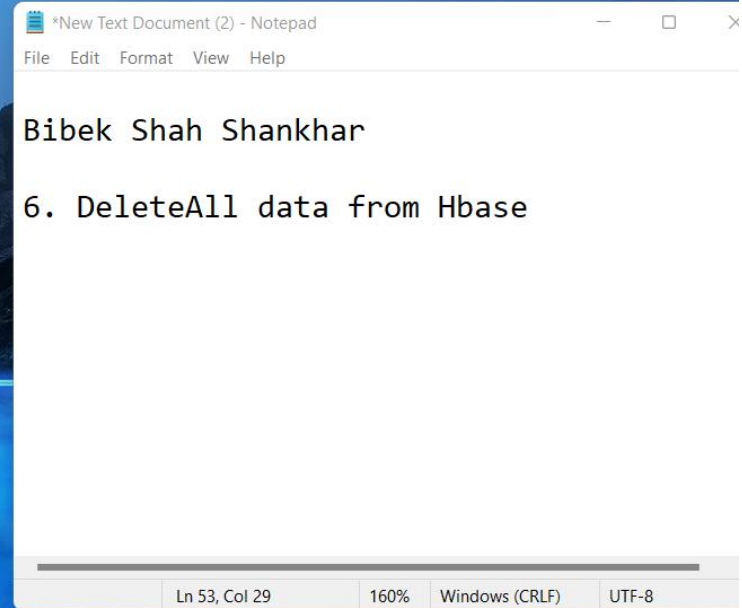


```
hbase(main):022:0> scan 'test'
ROW                COLUMN+CELL
 row3              column=cf:c, timestamp=1633788685687, value=value3
 row4              column=cf:d, timestamp=3, value=value6
2 row(s) in 0.1000 seconds

hbase(main):023:0> deleteall 'test', 'row4'
0 row(s) in 0.1590 seconds

hbase(main):024:0> scan 'test'
ROW                COLUMN+CELL
 row3              column=cf:c, timestamp=1633788685687, value=value3
1 row(s) in 0.0080 seconds

hbase(main):025:0>
```



*New Text Document (2) - Notepad

File Edit Format View Help

Bibek Shah Shankhar

6. DeleteAll data from Hbase

Ln 53, Col 29 160% Windows (CRLF) UTF-8

root@sandbox-hd | hbase_commands | Hortonworks Sand | +

Not secure | 192.168.239.135:4200

Apps | YouTube | Gmail | Google Drive | myHomepage | my... | Other bookmarks | Reading list

```
hbase(main):025:0> help 'scan'
```

Scan a table; pass table name and optionally a dictionary of scanner specifications. Scanner specifications may include one or more of: TIMERANGE, FILTER, LIMIT, STARTROW, STOPROW, ROWPREFIXFILTER, TIMESTAMP, MAXLENGTH or COLUMNS, CACHE or RAW, VERSIONS

If no columns are specified, all columns will be scanned.
To scan all members of a column family, leave the qualifier empty as in 'col_family:'.

The filter can be specified in two ways:

1. Using a filterString - more information on this is available in the Filter Language document attached to the HBASE-4176 JIRA
2. Using the entire package name of the filter.

Some examples:

```
hbase> scan 'hbase:meta'
hbase> scan 'hbase:meta', {COLUMNS => 'info:regioninfo'}
hbase> scan 'ns1:t1', {COLUMNS => ['c1', 'c2'], LIMIT => 10, STARTROW => 'xyz'}
hbase> scan 't1', {COLUMNS => ['c1', 'c2'], LIMIT => 10, STARTROW => 'xyz'}
hbase> scan 't1', {COLUMNS => 'c1', TIMERANGE => [1303668804, 1303668904]}
hbase> scan 't1', {REVERSED => true}
hbase> scan 't1', {ROWPREFIXFILTER => 'row2', FILTER => "
(QualifierFilter (>=, 'binary:xyz')) AND (TimestampsFilter ( 123, 456))"}
hbase> scan 't1', {FILTER =>
org.apache.hadoop.hbase.filter.ColumnPaginationFilter.new(1, 0)}
hbase> scan 't1', {CONSISTENCY => 'TIMELINE'}
```

For setting the Operation Attributes

```
hbase> scan 't1', { COLUMNS => ['c1', 'c2'], ATTRIBUTES => {'mykey' => 'myvalue'}
}
```

```
hbase> scan 't1', { COLUMNS => ['c1', 'c2'], AUTHORIZATIONS => ['PRIVATE','SECRET']
}
```

For experts, there is an additional option -- CACHE_BLOCKS -- which switches block caching for the scanner on (true) or off (false). By default it is enabled. Examples:

```
hbase> scan 't1', {COLUMNS => ['c1', 'c2'], CACHE_BLOCKS => false}
```

Windows taskbar: 11:33 PM 08-Dec-21

*New Text Document (2) - Notepad

File Edit Format View Help

Bibek Shah Shankhar

7. Help Commands in Hbase

Ln 62, Col 2 | 160% | Windows (CRLF) | UTF-8

root@sandbox-hd | hbase_commands_ | Hortonworks Sand | +

Not secure | 192.168.239.135:4200

Apps | YouTube | Gmail | Google Drive | myHomepage | my... | Other bookmarks | Reading list

Also for experts, there is an advanced option `-- RAW --` which instructs the scanner to return all cells (including delete markers and uncollected deleted cells). This option cannot be combined with requesting specific COLUMNS. Disabled by default. Example:

```
hbase> scan 't1', {RAW => true, VERSIONS => 10}
```

Besides the default `'toStringBinary'` format, `'scan'` supports custom formatting by column. A user can define a `FORMATTER` by adding it to the column name in the scan specification. The `FORMATTER` can be stipulated:

1. either as a `org.apache.hadoop.hbase.util.Bytes` method name (e.g. `toInt`, `toString`)
2. or as a custom class followed by method name: e.g. `'c(MyFormatterClass).format'`.

Example formatting `cf:qualifier1` and `cf:qualifier2` both as Integers:

```
hbase> scan 't1', {COLUMNS => ['cf:qualifier1:toInt',  
    'cf:qualifier2:c(org.apache.hadoop.hbase.util.Bytes).toInt'] }
```

Note that you can specify a `FORMATTER` by column only (`cf:qualifier`). You can set a formatter for all columns (including, all key parts) using the `"FORMATTER"` and `"FORMATTER_CLASS"` options. The default `"FORMATTER_CLASS"` is `"org.apache.hadoop.hbase.util.Bytes"`.

```
hbase> scan 't1', {FORMATTER => 'toString'}  
hbase> scan 't1', {FORMATTER_CLASS => 'org.apache.hadoop.hbase.util.Bytes', FORMATTER => 'toString'}
```

Scan can also be used directly from a table, by first getting a reference to a table, like such:

```
hbase> t = get_table 't'  
hbase> t.scan
```

Note in the above situation, you can still provide all the filtering, columns, options, etc as described above.

hbase(main):026:0> █

*New Text Document (2) - Notepad

File Edit Format View Help

Bibek Shah Shankhar

7. Help Commands in Hbase

Ln 62, Col 2 | 160% | Windows (CRLF) | UTF-8

11:33 PM
08-Dec-21

```
root@sandbox-hd | hbase_commands | Hortonworks Sand | +
Not secure | 192.168.239.135:4200
Apps YouTube Gmail Google Drive myHomepage | my... » Other bookmarks Reading list

hbase(main):026:0> describe 'test'
Table test is ENABLED
test
COLUMN FAMILIES DESCRIPTION
{NAME => 'cf', BLOOMFILTER => 'ROW', VERSIONS => '5', IN_MEMORY => 'false', KEEP_DE
LETED_CELLS => 'FALSE', DATA_BLOCK_ENCODING => 'NONE', TTL => 'FOREVER', COMPRESSIO
N => 'NONE', MIN_VERSIONS => '0', BLOCKCACHE => 'true', BLOCKSIZE => '65536', REPLI
CATION_SCOPE => '0'}
1 row(s) in 0.2590 seconds

hbase(main):027:0> alter 'test',{NAME =>'Cols', VERSIONS => 2}
Updating all regions with the new schema...
0/1 regions updated.
1/1 regions updated.
Done.
0 row(s) in 3.6820 seconds

hbase(main):028:0> describe 'test'
Table test is ENABLED
test
COLUMN FAMILIES DESCRIPTION
{NAME => 'Cols', BLOOMFILTER => 'ROW', VERSIONS => '2', IN_MEMORY => 'false', KEEP_
DELETED_CELLS => 'FALSE', DATA_BLOCK_ENCODING => 'NONE', TTL => 'FOREVER', COMPRESS
ION => 'NONE', MIN_VERSIONS => '0', BLOCKCACHE => 'true', BLOCKSIZE => '65536', REP
PLICATION_SCOPE => '0'}
{NAME => 'cf', BLOOMFILTER => 'ROW', VERSIONS => '5', IN_MEMORY => 'false', KEEP_DE
LETED_CELLS => 'FALSE', DATA_BLOCK_ENCODING => 'NONE', TTL => 'FOREVER', COMPRESSIO
N => 'NONE', MIN_VERSIONS => '0', BLOCKCACHE => 'true', BLOCKSIZE => '65536', REPLI
CATION_SCOPE => '0'}
2 row(s) in 0.0160 seconds

hbase(main):029:0> 
```

*New Text Document (2) - Notepad

File Edit Format View Help

Bibek SHah Shankhar

8. Alter a table in Hbase

Ln 69, Col 26 160% Windows (CRLF) UTF-8



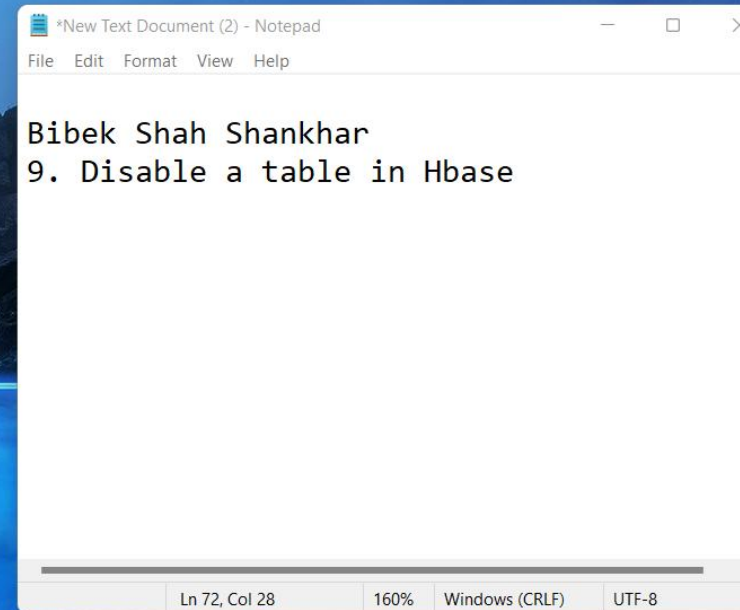

```
root@sandbox-hd | hbase_commands | Hortonworks Sand | +
Not secure | 192.168.239.135:4200
Apps | YouTube | Gmail | Google Drive | myHomepage | my... | Other bookmarks | Reading list

hbase(main):033:0> describe 'test'
Table test is ENABLED
test
COLUMN FAMILIES DESCRIPTION
{NAME => 'Cols', BLOOMFILTER => 'ROW', VERSIONS => '2', IN_MEMORY => 'false', KEEP_
DELETED_CELLS => 'FALSE', DATA_BLOCK_ENCODING => 'NONE', TTL => 'FOREVER', COMPRESSIO
N => 'NONE', MIN_VERSIONS => '0', BLOCKCACHE => 'true', BLOCKSIZE => '65536', REPLI
CATION_SCOPE => '0'}
{NAME => 'cf', BLOOMFILTER => 'ROW', VERSIONS => '5', IN_MEMORY => 'false', KEEP_DE
LETED_CELLS => 'FALSE', DATA_BLOCK_ENCODING => 'NONE', TTL => 'FOREVER', COMPRESSIO
N => 'NONE', MIN_VERSIONS => '0', BLOCKCACHE => 'true', BLOCKSIZE => '65536', REPLI
CATION_SCOPE => '0'}
2 row(s) in 0.0230 seconds

hbase(main):034:0> disable 'test'
0 row(s) in 4.3210 seconds

hbase(main):035:0> describe 'test'
Table test is DISABLED
test
COLUMN FAMILIES DESCRIPTION
{NAME => 'Cols', BLOOMFILTER => 'ROW', VERSIONS => '2', IN_MEMORY => 'false', KEEP_
DELETED_CELLS => 'FALSE', DATA_BLOCK_ENCODING => 'NONE', TTL => 'FOREVER', COMPRESSIO
N => 'NONE', MIN_VERSIONS => '0', BLOCKCACHE => 'true', BLOCKSIZE => '65536', REPLI
CATION_SCOPE => '0'}
{NAME => 'cf', BLOOMFILTER => 'ROW', VERSIONS => '5', IN_MEMORY => 'false', KEEP_DE
LETED_CELLS => 'FALSE', DATA_BLOCK_ENCODING => 'NONE', TTL => 'FOREVER', COMPRESSIO
N => 'NONE', MIN_VERSIONS => '0', BLOCKCACHE => 'true', BLOCKSIZE => '65536', REPLI
CATION_SCOPE => '0'}
2 row(s) in 0.0140 seconds

hbase(main):036:0> 
```




```
root@sandbox-hd | hbase_commands | Hortonworks Sand | +
Not secure | 192.168.239.135:4200
Apps | YouTube | Gmail | Google Drive | myHomepage | my... | Other bookmarks | Reading list

hbase(main):036:0> describe 'test'
Table test is DISABLED
test
COLUMN FAMILIES DESCRIPTION
{NAME => 'Cols', BLOOMFILTER => 'ROW', VERSIONS => '2', IN_MEMORY => 'false', KEEP_DELETED_CELLS => 'FALSE', DATA_BLOCK_ENCODING => 'NONE', TTL => 'FOREVER', COMPRESSION => 'NONE', MIN_VERSIONS => '0', BLOCKCACHE => 'true', BLOCKSIZE => '65536', REPLICATION_SCOPE => '0'}
{NAME => 'cf', BLOOMFILTER => 'ROW', VERSIONS => '5', IN_MEMORY => 'false', KEEP_DELETED_CELLS => 'FALSE', DATA_BLOCK_ENCODING => 'NONE', TTL => 'FOREVER', COMPRESSION => 'NONE', MIN_VERSIONS => '0', BLOCKCACHE => 'true', BLOCKSIZE => '65536', REPLICATION_SCOPE => '0'}
2 row(s) in 0.0890 seconds

hbase(main):037:0> enable 'test'
0 row(s) in 1.2350 seconds

hbase(main):038:0> describe 'test'
Table test is ENABLED
test
COLUMN FAMILIES DESCRIPTION
{NAME => 'Cols', BLOOMFILTER => 'ROW', VERSIONS => '2', IN_MEMORY => 'false', KEEP_DELETED_CELLS => 'FALSE', DATA_BLOCK_ENCODING => 'NONE', TTL => 'FOREVER', COMPRESSION => 'NONE', MIN_VERSIONS => '0', BLOCKCACHE => 'true', BLOCKSIZE => '65536', REPLICATION_SCOPE => '0'}
{NAME => 'cf', BLOOMFILTER => 'ROW', VERSIONS => '5', IN_MEMORY => 'false', KEEP_DELETED_CELLS => 'FALSE', DATA_BLOCK_ENCODING => 'NONE', TTL => 'FOREVER', COMPRESSION => 'NONE', MIN_VERSIONS => '0', BLOCKCACHE => 'true', BLOCKSIZE => '65536', REPLICATION_SCOPE => '0'}
2 row(s) in 0.0120 seconds

hbase(main):039:0> 
```

*New Text Document (2) - Notepad

File Edit Format View Help

Bibek SHah Shankhar

10. Enable a table in HBase

Ln 77, Col 28 | 160% | Windows (CRLF) | UTF-8