西安科技大学

**计算机学院实验报告**

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课程名称 大数据技术原理与应用 实验（四）

**1实验名称：**

大数据技术原理与应用综合实验

**2实验目的：**

初识并使用配置Hbase

**3实验原理：**

Hbase相关使用原理

**4实验内容与结果；**

4.1：

下载Hbase

4.2：

解压Hbase

4.3：

配置HBase

4.4：

启动HBase服务

4.5：

启动HBase客户端

4.6：

常见命令操作

**5实验截图及简单总结：**

1. Create a table.

Use the create command to create a new table. You must specify the table name and the ColumnFamily name.

hbase(main):001:0> create 'test', 'cf'

0 row(s) in 0.4170 seconds

=> Hbase::Table - test

1. List Information About your Table

Use the list command to confirm your table exists

hbase(main):002:0> list 'test'

TABLE

test

1 row(s) in 0.0180 seconds

=> ["test"]

Now use the describe command to see details, including configuration defaults

hbase(main):003:0> describe 'test'

Table test is ENABLED

test

COLUMN FAMILIES DESCRIPTION

{NAME => 'cf', VERSIONS => '1', EVICT\_BLOCKS\_ON\_CLOSE => 'false', NEW\_VERSION\_BEHAVIOR => 'false', KEEP\_DELETED\_CELLS => 'FALSE', CACHE\_DATA\_ON\_WRITE =>

'false', DATA\_BLOCK\_ENCODING => 'NONE', TTL => 'FOREVER', MIN\_VERSIONS => '0', REPLICATION\_SCOPE => '0', BLOOMFILTER => 'ROW', CACHE\_INDEX\_ON\_WRITE => 'f

alse', IN\_MEMORY => 'false', CACHE\_BLOOMS\_ON\_WRITE => 'false', PREFETCH\_BLOCKS\_ON\_OPEN => 'false', COMPRESSION => 'NONE', BLOCKCACHE => 'true', BLOCKSIZE

=> '65536'}

1 row(s)

Took 0.9998 seconds

1. Put data into your table.

To put data into your table, use the put command.

hbase(main):003:0> put 'test', 'row1', 'cf:a', 'value1'

0 row(s) in 0.0850 seconds

hbase(main):004:0> put 'test', 'row2', 'cf:b', 'value2'

0 row(s) in 0.0110 seconds

hbase(main):005:0> put 'test', 'row3', 'cf:c', 'value3'

0 row(s) in 0.0100 seconds

Here, we insert three values, one at a time. The first insert is at row1, column cf:a, with a value of value1. Columns in HBase are comprised of a column family prefix, cf in this example, followed by a colon and then a column qualifier suffix, a in this case.

1. Scan the table for all data at once.

One of the ways to get data from HBase is to scan. Use the scan command to scan the table for data. You can limit your scan, but for now, all data is fetched.

hbase(main):006:0> scan 'test'

ROW COLUMN+CELL

row1 column=cf:a, timestamp=1421762485768, value=value1

row2 column=cf:b, timestamp=1421762491785, value=value2

row3 column=cf:c, timestamp=1421762496210, value=value3

3 row(s) in 0.0230 seconds

1. Get a single row of data.

To get a single row of data at a time, use the get command.

hbase(main):007:0> get 'test', 'row1'

COLUMN CELL

cf:a timestamp=1421762485768, value=value1

1 row(s) in 0.0350 seconds

1. Disable a table.

If you want to delete a table or change its settings, as well as in some other situations, you need to disable the table first, using the disable command. You can re-enable it using the enable command.

hbase(main):008:0> disable 'test'

0 row(s) in 1.1820 seconds

hbase(main):009:0> enable 'test'

0 row(s) in 0.1770 seconds

Disable the table again if you tested the enable command above:

hbase(main):010:0> disable 'test'

0 row(s) in 1.1820 seconds

1. Drop the table.

To drop (delete) a table, use the drop command.

hbase(main):011:0> drop 'test'

0 row(s) in 0.1370 seconds

1. Exit the HBase Shell.

To exit the HBase Shell and disconnect from your cluster, use the quit command. HBase is still running in the background.