

# Capstone: Instant Health Alert System – Final Submission

## A script to create HBase table with 3 families (attribute, limit, alert)

### Set up for the HBase cluster

Cluster: Hbasecluster **Waiting** Cluster ready to run steps.

Summary

Application user interfaces

Monitoring

Hardware

Configurations

Events

Steps

Bootstrap actions

Summary

ID: j-1W722OU65RTVS

Creation date: 2023-03-28 13:57 (UTC+5:30)

Elapsed time: 6 minutes

After last step completes: Cluster waits

Termination protection: Off [Change](#)

Tags: -- [View All](#) / [Edit](#)

Master public DNS: ec2-52-23-186-126.compute-1.amazonaws.com [Connect to the Master Node Using SSH](#)

Application user interfaces

Persistent user interfaces [YARN timeline server](#)

On-cluster user interfaces [Not Enabled](#) [Enable an SSH Connection](#)

Security and access

Key name: MyNew\_KeyValue

EC2 instance profile: EMR\_EC2\_DefaultRole

EMR role: EMR\_DefaultRole

Configuration details

Release label: emr-5.30.1

Hadoop distribution: Amazon 2.8.5

Applications: HBase 1.4.13

Log URI: s3://aws-logs-545120555452-us-east-1/elasticmapreduce/ [View](#)

EMRFS consistent view: Disabled

Custom AMI ID: --

Network and hardware

Availability zone: us-east-1b

Subnet ID: [subnet-007e940c0eb58c44b](#)

Master: **Running** 1 m4.xlarge

Core: --

Task: --

Cluster scaling: Not enabled

Auto-termination: Not enabled

Navigate to HBase shell using below commands:

```
sudo -i
hbase shell
```

```
[root@ip-172-31-92-60 ~]# hbase shell
HBase Shell
Use "help" to get list of supported commands.
Use "exit" to quit this interactive shell.
Version 1.4.13, rUnknown, Fri Apr 17 15:18:24 UTC 2020
```

### Create threshold\_ref table in HBase

```
create 'threshold_ref','attribute','limit','alert';
```

```
hbase(main):001:0> create 'threshold_ref','attribute','limit','alert'
0 row(s) in 1.6340 seconds
```

### Insert 12 records into HBase table

```
put 'threshold_ref', '1', 'attribute:attribute', 'heartBeat';
put 'threshold_ref', '1', 'limit:low_age_limit', '0';
put 'threshold_ref', '1', 'limit:high_age_limit', '40';
```

```
put 'threshold_ref', '1', 'limit:low_value', '0';
put 'threshold_ref', '1', 'limit:high_value', '69';
put 'threshold_ref', '1', 'alert:alert_flag', '1';
put 'threshold_ref', '1', 'alert:alert_message', 'Low Heart Rate than Normal';
```

```
put 'threshold_ref', '2', 'attribute:attribute', 'heartBeat';
put 'threshold_ref', '2', 'limit:low_age_limit', '0';
put 'threshold_ref', '2', 'limit:high_age_limit', '40';
put 'threshold_ref', '2', 'limit:low_value', '70';
put 'threshold_ref', '2', 'limit:high_value', '78';
put 'threshold_ref', '2', 'alert:alert_flag', '0';
put 'threshold_ref', '2', 'alert:alert_message', 'Normal';
```

```
put 'threshold_ref', '3', 'attribute:attribute', 'heartBeat';
put 'threshold_ref', '3', 'limit:low_age_limit', '0';
put 'threshold_ref', '3', 'limit:high_age_limit', '40';
put 'threshold_ref', '3', 'limit:low_value', '79';
put 'threshold_ref', '3', 'limit:high_value', '9999';
put 'threshold_ref', '3', 'alert:alert_flag', '1';
put 'threshold_ref', '3', 'alert:alert_message', 'Higher Heart Rate than Normal';
```

```
put 'threshold_ref', '4', 'attribute:attribute', 'bp';
put 'threshold_ref', '4', 'limit:low_age_limit', '0';
put 'threshold_ref', '4', 'limit:high_age_limit', '40';
put 'threshold_ref', '4', 'limit:low_value', '0';
put 'threshold_ref', '4', 'limit:high_value', '160';
put 'threshold_ref', '4', 'alert:alert_flag', '1';
put 'threshold_ref', '4', 'alert:alert_message', 'Low BP than Normal';
```

```
put 'threshold_ref', '5', 'attribute:attribute', 'bp';
put 'threshold_ref', '5', 'limit:low_age_limit', '0';
put 'threshold_ref', '5', 'limit:high_age_limit', '40';
put 'threshold_ref', '5', 'limit:low_value', '161';
put 'threshold_ref', '5', 'limit:high_value', '220';
put 'threshold_ref', '5', 'alert:alert_flag', '0';
put 'threshold_ref', '5', 'alert:alert_message', 'Normal';
```

```
put 'threshold_ref', '6', 'attribute:attribute', 'bp';
put 'threshold_ref', '6', 'limit:low_age_limit', '0';
put 'threshold_ref', '6', 'limit:high_age_limit', '40';
put 'threshold_ref', '6', 'limit:low_value', '221';
put 'threshold_ref', '6', 'limit:high_value', '9999';
put 'threshold_ref', '6', 'alert:alert_flag', '1';
put 'threshold_ref', '6', 'alert:alert_message', 'Higer BP than Normal';
```

```
put 'threshold_ref', '7', 'attribute:attribute', 'heartBeat';
put 'threshold_ref', '7', 'limit:low_age_limit', '41';
put 'threshold_ref', '7', 'limit:high_age_limit', '100';
put 'threshold_ref', '7', 'limit:low_value', '0';
put 'threshold_ref', '7', 'limit:high_value', '65';
put 'threshold_ref', '7', 'alert:alert_flag', '1';
put 'threshold_ref', '7', 'alert:alert_message', 'Low Heart Rate than Normal';
```

```
put 'threshold_ref', '8', 'attribute:attribute', 'heartBeat';
put 'threshold_ref', '8', 'limit:low_age_limit', '41';
put 'threshold_ref', '8', 'limit:high_age_limit', '100';
put 'threshold_ref', '8', 'limit:low_value', '66';
```

```

put 'threshold_ref', '8', 'limit:high_value', '73';
put 'threshold_ref', '8', 'alert:alert_flag', '0';
put 'threshold_ref', '8', 'alert:alert_message', 'Normal';

put 'threshold_ref', '9', 'attribute:attribute', 'heartBeat';
put 'threshold_ref', '9', 'limit:low_age_limit', '41';
put 'threshold_ref', '9', 'limit:high_age_limit', '100';
put 'threshold_ref', '9', 'limit:low_value', '74';
put 'threshold_ref', '9', 'limit:high_value', '9999';
put 'threshold_ref', '9', 'alert:alert_flag', '1';
put 'threshold_ref', '9', 'alert:alert_message', 'Higher Heart Rate than Normal';

put 'threshold_ref', '10', 'attribute:attribute', 'bp';
put 'threshold_ref', '10', 'limit:low_age_limit', '41';
put 'threshold_ref', '10', 'limit:high_age_limit', '100';
put 'threshold_ref', '10', 'limit:low_value', '0';
put 'threshold_ref', '10', 'limit:high_value', '150';
put 'threshold_ref', '10', 'alert:alert_flag', '1';
put 'threshold_ref', '10', 'alert:alert_message', 'Low BP than Normal';

put 'threshold_ref', '11', 'attribute:attribute', 'bp';
put 'threshold_ref', '11', 'limit:low_age_limit', '41';
put 'threshold_ref', '11', 'limit:high_age_limit', '100';
put 'threshold_ref', '11', 'limit:low_value', '151';
put 'threshold_ref', '11', 'limit:high_value', '180';
put 'threshold_ref', '11', 'alert:alert_flag', '0';
put 'threshold_ref', '11', 'alert:alert_message', 'Normal';

put 'threshold_ref', '12', 'attribute:attribute', 'bp';
put 'threshold_ref', '12', 'limit:low_age_limit', '41';
put 'threshold_ref', '12', 'limit:high_age_limit', '100';
put 'threshold_ref', '12', 'limit:low_value', '181';
put 'threshold_ref', '12', 'limit:high_value', '9999';
put 'threshold_ref', '12', 'alert:alert_flag', '1';
put 'threshold_ref', '12', 'alert:alert_message', 'Higher BP than Normal';

```

## Screenshot for insertion of records

```

hbase(main):003:0* put 'threshold_ref', '1', 'attribute:attribute', 'heartBeat';
put 'threshold_ref', '2', 'limit:high_value', '78';
put 'threshold_ref', '2', 'alert:alert_flag', '0';
put 'threshold_ref', '2', 'alert:alert_message', 'Normal';

put 'threshold_ref', '3', 'attribute:attribute', 'heartBeat';
put 'threshold_ref', '3', 'limit:low_age_limit', '0';
put 'threshold_ref', '3', 'limit:high_age_limit', '40';
put 'threshold_ref', '3', 'limit:low_value', '79';
put 'threshold_ref', '3', 'limit:high_value', '9999';
put 'threshold_ref', '3', 'alert:alert_flag', '1';
put 'threshold_ref', '3', 'alert:alert_message', 'Higher Heart Rate than Normal'
;

put 'threshold_ref', '4', 'attribute:attribute', 'bp';
put 'threshold_ref', '4', 'limit:low_age_limit', '0';
put 'threshold_ref', '4', 'limit:high_age_limit', '40';
put 'threshold_ref', '4', 'limit:low_value', '0';
put 'threshold_ref', '4', 'limit:high_value', '160';
put 'threshold_ref', '4', 'alert:alert_flag', '1';
put 'threshold_ref', '4', 'alert:alert_message', 'Low BP than Normal';

put 'threshold_ref', '5', 'attribute:attribute', 'bp';
put 'threshold_ref', '5', 'limit:low_age_limit', '0';
put 'threshold_ref', '5', 'limit:high_age_limit', '40';
put 'threshold_ref', '5', 'limit:low_value', '161';
put 'threshold_ref', '5', 'limit:high_value', '220';
put 'threshold_ref', '5', 'alert:alert_flag', '0';

```

## View records in HBase table

```
scan 'threshold_ref';
```

```
hbase(main):098:0* scan 'threshold_ref'
```

## Screenshots of records

```
ROW          COLUMN+CELL
 1          column=alert:alert_flag, timestamp=1679727530966, value=1
 1          column=alert:alert_message, timestamp=1679727530971, value
           =Low Heart Rate than Normal
 1          column=attribute:attribute, timestamp=1679727530926, value
           =heartBeat
 1          column=limit:high_age_limit, timestamp=1679727530951, valu
           e=40
 1          column=limit:high_value, timestamp=1679727530962, value=69
 1          column=limit:low_age_limit, timestamp=1679727530947, value
           =0
 1          column=limit:low_value, timestamp=1679727530958, value=0
 10         column=alert:alert_flag, timestamp=1679727531306, value=1
 10         column=alert:alert_message, timestamp=1679727531310, value
           =Low BP than Normal
 10         column=attribute:attribute, timestamp=1679727531291, value
           =bp
 10         column=limit:high_age_limit, timestamp=1679727531297, valu
           e=100
 10         column=limit:high_value, timestamp=1679727531303, value=15
           0
 10         column=limit:low_age_limit, timestamp=1679727531294, value
           =41
 10         column=limit:low_value, timestamp=1679727531300, value=0
 11         column=alert:alert_flag, timestamp=1679727531326, value=0
 11         column=alert:alert_message, timestamp=1679727531329, value
           =Normal
 11         column=attribute:attribute, timestamp=1679727531312, value
           =bp
 11         column=limit:high_age_limit, timestamp=1679727531318, valu
           e=100
 11         column=limit:high_value, timestamp=1679727531323, value=18
           0
 11         column=limit:low_age_limit, timestamp=1679727531315, value
           =41
 11         column=limit:low_value, timestamp=1679727531321, value=151
```

```
8          column=alert:alert_message, timestamp=1679992681690, value
           =Normal
8          column=attribute:attribute, timestamp=1679992681657, value
           =heartBeat
8          column=limit:high_age_limit, timestamp=1679992681668, valu
           e=100
8          column=limit:high_value, timestamp=1679992681679, value=73
8          column=limit:low_age_limit, timestamp=1679992681663, value
           =41
8          column=limit:low_value, timestamp=1679992681674, value=66
9          column=alert:alert_flag, timestamp=1679992681728, value=1
9          column=alert:alert_message, timestamp=1679992681734, value
           =Higher Heart Rate than Normal
9          column=attribute:attribute, timestamp=1679992681696, value
           =heartBeat
9          column=limit:high_age_limit, timestamp=1679992681708, valu
           e=100
9          column=limit:high_value, timestamp=1679992681722, value=99
           99
9          column=limit:low_age_limit, timestamp=1679992681702, value
           =41
9          column=limit:low_value, timestamp=1679992681715, value=74
12 row(s) in 0.3570 seconds
```