

Note 2AZG8AS4G



```
run fun
import java.io
import java.text.SimpleDateFormat
import java.util.Date

import java.util.{Locale, Date}

import akka.actor.FSM.LogEntry
import org.apache.spark.rdd.RDD
import org.apache.spark.{SparkContext, SparkConf}

import scala.collection.immutable.HashSet
import scala.io.Source
import scala.reflect.io.File
import scala.util.matching.Regex

/**
 * Created by preethi on 10/10/15.
 */

class LogEntry(layer: String, node: String, filePath: String) extends Serializable {
    var layerFile: String = layer
    val nodeName: String = node
    val absolutePath: String = filePath
}

class EntryExitTiming(nodeName: String, commandName: String, entryTime: Date, exitTime: Date) extends Serializable {
    var nodeName: String = nodeName
    var command: String = commandName
    var startTime: Date = entryTime
    var endTime: Date = exitTime
    //println((nodeName + " " + commandName + " " + entryTime + " " + exitTime))
}

var layerDetailsMap = new HashMap[String, RDD[String]]()
var nodeVizMap = new HashMap[String, Map[String, RDD[String]]]()
var nodeDetailsMap = new HashMap[String, RDD[String]]()
var layerVizMap = new HashMap[String, Map[String, RDD[String]]>()
def LogAnalysisDetails(errorLines: RDD[String], errorString: RDD[String], nodeName: String, layer: String){
    nodeVizMap += ((layer -> errorString))
    layerDetailsMap += ((layer -> errorString))
}

// var nodeVizMap = new HashMap[String, Map[String, RDD[String]]()
if(layerVizMap.contains(layer)){
    nodeDetailsMap += ((nodeName -> errorString))
    layerVizMap += ((layer -> nodeDetailsMap))
}else{
    var nodeMap = LayerVizMap(layer) // (nodeName -> errorString)
    nodeVizMap += ((nodeName -> errorString))
    layerVizMap += ((layer -> nodeMap))
}

val EMPTY = new LogEntry("ignore", "ignore", "ignore")

var startOfCliTracing = false;
def verifyLinesInCliTracingRange(line: String, timing: EntryExitTiming, cmd: String): Boolean = {
    if(!line.contains("COMMAND "+cmd+" Started at ')" ) {
        startOfCliTracing = true
    } else if(line.contains("COMMAND "+cmd+" Ended at ')" ) {
        startOfCliTracing = false
    } else if(startOfCliTracing) {
        return true;
    }
    return false
}

def containsError(line: String): Boolean = {
    val regex = new Regex("(rc\\$+\\.\\$+)[0-9]\\$+")
    val lineNumber = regex.findFirstInLine
    if(lineNumber != None) {
        return true
    }
    return false
}

def analyzeFoscli(logEntry: LogEntry, timing: EntryExitTiming, cmd: String): Unit = {
    val format = new java.text.SimpleDateFormat(" MM dd yyyy, EE, hh:mm:ss")
    var errorString = ""
    val inputFile: RDD[String] = sc.textFile(logEntry.absolutePath, 1).cache()
    val fileStoreHeader: RDD[String] = inputFile.filter(line => verifyLinesInCliTracingRange(line, timing, cmd))

    val errorIndicationLine: RDD[String] = fileStoreHeader.filter(line => containsError(line))
    // errorIndicationLine.foreach(println)

    LogAnalysisDetails("",errorIndicationLine,logEntry.nodeName,logEntry.layerFile)
}

def errorPool(line: String): Boolean = {
    val regex = new Regex("^(-|S)\\$+")
    val nonZeroLineOccurrence = regex.findFirstInLine
    if(nonZeroLineOccurrence != None) {
        return true
    }
    return false
}

def poolCwdAndTimeFilter(line: String, startTime: Date, endTime: Date): Boolean = {

    val format = new java.text.SimpleDateFormat("%Y-%m-%d %H:%M:%S")
    val regex = new Regex("(^|\\$)([0-9])")
    val firstAccurance = regex.findFirstInLine
    if(firstAccurance != None) {
        val dateStamp = format.parse(format.toString().split("\\$").toList())
        if (dateStamp.equals(startTime) || dateStamp.equals(endTime) || (dateStamp.order(startTime) << dateStamp.order(endTime))) {
            return true
        }
    }
    return false
}

def analyzepool(logEntry: LogEntry,timing: EntryExitTiming, cmd: String): Unit = {

    val absolutePath: RDD[String] = sc.textFile(logEntry.absolutePath, 1).cache()

    val filterendlinesByTime: RDD[String] = absolutePath.filter(line => PoolCwdAndTimeFilter(line, timing.startTime, timing.endTime))

    val poolErrorLines: RDD[String] = filterendlinesByTime.filter(line => errorPool(line))

    LogAnalysisDetails("", poolErrorLines, logEntry.nodeName, logEntry.layerFile)
}

def parseLogEntry(logEntry: LogEntry,timing: EntryExitTiming, cmd: String): Unit = {


    logEntry.layerFile match {
        case "pool.log" => analyzepool(logEntry, timing, cmd)
        case "foscli_global_trace" => analyzeFoscli(logEntry, timing, cmd)
        case "syslog_cdb" => analyzeSyscd(logEntry, timing)
        case "cfglog" => analyzeCfglog(logEntry)
        case default => {}
    }
}

def analyzeCfglog(logEntry: LogEntry): Unit = {
    val errorLines: RDD[String] = filterErrorCfglog(logEntry.absolutePath, sc)
    LogAnalysisDetails("", errorLines, logEntry.nodeName, logEntry.layerFile)
    // println("- " + errorLines + " " + logEntry.nodeName + " " + logEntry.layerFile)

    def filterErrorCfglog(filePath: String, sc: SparkContext): RDD[String] = {
        // println("---filterVologOverTime: startDateTime: , startDateTime , 'endDateTime', endDateTime")


        val inputFile: RDD[String] = sc.textFile(filePath, 1).cache()
        val filterendlines: RDD[String] = inputFile.filter(line => filterCfglogErrors(line))
        // filteredLines.foreach(println)
        return filterendlines
    }
}
```

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**Zeppelin**

Notebook▼ Interpret

● Connected

Zeppelin

Notebook

Interpret

● Connected

```
<console>:30: warning: imported 'LogEntry' is permanently hidden by definition of class LogEntry
import akka.actor.FSM.LogEntry
      ^

run: Unit
Wed Oct 07 10:06:01 IST 2015*****Wed Oct 07 10:06:05 IST 2015
MapPartitionsRDD[1649] at filter at <console>:275 node1 syslog.caa
Wed Oct 07 10:06:10 IST 2015*****Wed Oct 07 10:06:12 IST 2015
MapPartitionsRDD[1672] at filter at <console>:275 node2 syslog.caa
Wed Oct 07 10:06:35 IST 2015*****Wed Oct 07 10:06:36 IST 2015
MapPartitionsRDD[1684] at filter at <console>:275 node3 syslog.caa
Mon Oct 12 17:16:00 IST 2015*****Mon Oct 12 17:16:00 IST 2015
MapPartitionsRDD[1707] at filter at <console>:275 node4 syslog.caa

node1
*****
|          LayerName|ErrorCount|
|-----|-----|
|          pool1.log|         0|
|          cfglog   |        32|
|       visCwdi.log |         0|
|       syslog.caa  |         0|
```

```

jupyterlab:trace 0]
Zeppelin Notebook Interpreter
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node2
-----
| LayerName|ErrorCount|
-----
| pool.Log| 0|
| cfgLog| 32|
| viocmd.Log| 0|
| syslog.caa| 0|
| jioscli_global.trace| 0|
-----

node3
-----
| LayerName|ErrorCount|
-----
| pool.Log| 0|
| cfgLog| 16|
| viocmd.Log| 0|
| syslog.caa| 2|
| jioscli_global.trace| 1|
-----

node4
-----
| LayerName|ErrorCount|
-----
| pool.Log| 0|
| cfgLog| 32|
| viocmd.Log| 0|
| syslog.caa| 0|
| jioscli_global.trace| 0|
-----

node1-->0
node3-->1
node4-->0
node2-->0

ioscli
-----
| NodeName|ErrorCount|
-----
| node1| 0|
| node3| 1|
| node4| 0|
| node2| 0|
-----

cfg
-----
| NodeName|ErrorCount|
-----
| node1| 32|
| node3| 16|
| node4| 32|
| node2| 32|
-----

syslog
-----
| NodeName|ErrorCount|
-----
| node1| 0|
| node3| 2|
| node4| 0|
| node2| 0|
-----

pool
-----
| NodeName|ErrorCount|
-----
| node1| 0|
| node3| 0|
| node4| 0|
| node2| 0|
-----

viocmd
-----
| NodeName|ErrorCount|
-----
| node1| 0|
| node3| 0|
| node4| 0|
| node2| 0|
-----

*****Problem on the node *****NODE1
-> noticed in the layer -> pool.LogError instances -->0
-----
-> noticed in the layer -> cfgLogError instances -->32
-----
L0 7471248 violibMotify.c 924 Error from VKE! rc=22
L0 7471248 violibMotify.c 926 Error for Update: name:'cluster0'repo:'Cu0v' utype='pseudo/node/cluster'
L0 8061180 violibMotify.c 1184 Error from VKE! rc=22
L0 8061180 violibMotify.c 1188 Error for name:'cluster0' attr:'node_uuid' old:'00000000-0000-0000-0000-000000000000' new:'6477bb14-407f-11e5-bc5d-5cf3fc8d8682' utype:'pseudo/node/cluster' repo:'CuAt'MS 7471250 8061180 /usr/lib/methods/cfgcluster -l cluster0
L0 7471250 violibMotify.c 924 Error from VKE! rc=22
L0 7471250 violibMotify.c 926 Error for Update: name:'cluster0'repo:'Cu0v' utype='pseudo/node/cluster'
L0 8323104 violibMotify.c 924 Error from VKE! rc=22
L0 8323104 violibMotify.c 926 Error for Update: name:'ent0'repo:'Cu0v' utype='adapter/IBM,hsa/ethernet'
L0 4915360 violibMotify.c 924 Error from VKE! rc=22
L0 4915360 violibMotify.c 926 Error for Update: name:'fcs0'repo:'Cu0v' utype='adapter/pciex/df1000f114108a0'
L0 4915360 violibMotify.c 924 Error from VKE! rc=22
L0 4915360 violibMotify.c 926 Error for Update: name:'fcs1'repo:'Cu0v' utype='adapter/pciex/df1000f114108a0'
L0 10485860 violibMotify.c 924 Error from VKE! rc=22
L0 10485860 violibMotify.c 926 Error for Update: name:'fcs0'repo:'Cu0v' utype='adapter/pciex/df1000f114108a0'
L0 10485860 violibMotify.c 924 Error from VKE! rc=22
L0 10485860 violibMotify.c 926 Error for Update: name:'fcs1'repo:'Cu0v' utype='adapter/pciex/df1000f114108a0'
L0 5570572 violibMotify.c 924 Error from VKE! rc=22
L0 5570572 violibMotify.c 926 Error for Update: name:'fcs0'repo:'Cu0v' utype='adapter/pciex/df1000f114108a0'
L0 5570572 violibMotify.c 924 Error from VKE! rc=22
L0 5570572 violibMotify.c 926 Error for Update: name:'fcs1'repo:'Cu0v' utype='adapter/pciex/df1000f114108a0'
L0 4718594 violibMotify.c 924 Error from VKE! rc=22
L0 4718594 violibMotify.c 926 Error for Update: name:'ent0'repo:'Cu0v' utype='adapter/pciex/14104003'
L0 4718594 violibMotify.c 924 Error from VKE! rc=22
L0 4718594 violibMotify.c 926 Error for Update: name:'ent1'repo:'Cu0v' utype='adapter/pciex/14104003'
L0 4653166 violibMotify.c 924 Error from VKE! rc=22
L0 4653166 violibMotify.c 926 Error for Update: name:'fcs0'repo:'Cu0v' utype='adapter/pciex/df1000f114108a0'
L0 4653166 violibMotify.c 924 Error from VKE! rc=22
L0 4653166 violibMotify.c 926 Error for Update: name:'fcs1'repo:'Cu0v' utype='adapter/pciex/df1000f114108a0'
L0 6095102 violibMotify.c 924 Error from VKE! rc=22
L0 6095102 violibMotify.c 926 Error for Update: name:'ent0'repo:'Cu0v' utype='adapter/pciex/14104003'
L0 6095102 violibMotify.c 924 Error from VKE! rc=22
L0 6095102 violibMotify.c 926 Error for Update: name:'ent1'repo:'Cu0v' utype='adapter/pciex/14104003'
-----
-> noticed in the layer -> viocmd.LogError instances -->0
-----
-> noticed in the layer -> syslog.caaError instances -->0
-----
-> noticed in the layer -> jioscli_global.traceError instances -->0
-----

```

```
%sql
select LayerName, ErrorCount from model
```



