

# Monitor work Hadoop

## Contents

|   |   |
|---|---|
| <code>dhbk.maas.api.httpconnect</code> .....        | 1 |
| <code>dhbk.maas.api.hadoop.monitor</code> .....     | 1 |
| <code>dhbk.maas.api.hadoop.monitor.obj</code> ..... | 5 |
| <code>dhbk.maas.api.mahout.excute</code> .....      | 8 |

## **dhbk.maas.api.httpconnect**

### **### Class HttpConnect**

**\*\*** Provide methods to connect and send request to host

#### **Constructor Summary :**

*HttpConnect ()* : Constructs a new http connect that is invisible

#### **Method Summary :**

*sendRequestGet (String url, Header[] headers)*

*throws ClientProtocolException, IOException*

- Send request GET
- Params :
  - String url : URL will receive request
  - Header[] headers : array header to add on request
- Return org.apache.http.HttpResponse

*sendRequestPost (String url, Header[] headers, ArrayList<String[]> values)*

- Send request POST
- Params :
  - String url : URL will receive request
  - Header[] headers : array header to add on request
  - ArrayList<String[]> values : pairs parameter <key, value> will add on request
- Return org.apache.http.HttpResponse

## **dhbk.maas.api.hadoop.monitor**

**\*\*\*** Manage components on hadoop

### **### Class HistoryServer**

**\*\*** Manage history server

#### **Constructor Summary :**

**HistoryManage** (String address) : Constructs a new object manage history with address host is address and port will take value DEFAULT\_PORT

**HistoryManage** (String address, String port) : Constructs a new object manage history with address host is address and port is port

**Method Summary :**

**getHistoryJobs** () throws ClientProtocolException, IOException, JSONException

- Get about list objects history job
- Return ArrayList<dmbk.maas.hadoop.monitor.obj.HistoryJob>

**getHistoryInfo** () throws ClientProtocolException, IOException, JSONException

- Get about information history
- Return  
ArrayList<dmbk.maas.hadoop.monitor.obj.HistoryInfo>

**getHistoryJobTasks** (String idJob) throws ClientProtocolException, IOException, JSONException

- Get information history job task
- Return ArrayList  
<dmbk.maas.hadoop.monitor.obj.HistoryJobTask>

**Field Summary :**

```
private String url ;           // URL connection
private String address ;      // address host name
private String port ;         // port connection, initialized DEFAULT_PORT
```

```
private static final String HISTORY_JOB_PATH;    // Default path
```

```
private static final String HISTORY_JOB_TASK_PATH
```

```
private static final String DEFAULT_PORT;       // Default port
```

```
/* Attributes of history job */
public static final String HIS_SUBMITTIME ;
public static final String HIS_STATE;
public static final String HIS_USER;
public static final String HIS_REDUCESTOTAL;
public static final String HIS_MAPSCOMPLETED ;
```

```
public static final String HIS_STARTTIME;
public static final String HIS_ID;
public static final String HIS_NAME;
public static final String HIS_REDUCESCOMPLETED;
public static final String HIS_MAPSTOTAL;
public static final String HIS_QUEUE;
public static final String HIS_FINISHTIME;

/* Attributes of history job task */
public static final String HIS_JOB_TASK_PROGRESS;
public static final String HIS_JOB_TASK_ELAPSEDTIME;
public static final String HIS_JOB_TASK_STATE;
public static final String HIS_JOB_TASK_STARTTIME;
public static final String HIS_JOB_TASK_ID;
public static final String HIS_JOB_TASK_TYPE;
public static final String HIS_JOB_TASK_SUCCESSFULATTEMPT;
public static final String HIS_JOB_TASK_FINISHTIME;
```

### ### Class ResourceManage

\*\* Manage resource (cluster)

#### Constructor Summary :

**ResourceManage** (String address) : Constructs a new object manage history with address host is address and port will take value *DEFAULTL\_PORT*

**ResourceManage** (String address, String port) : Constructs a new object manage history with address host is *address* and port is *port*

#### Method Summary :

**getClusterApps** (int nTop) throws *IOException*, *JSONException*

- Get list object *ReMngClusterApp*
- Return *ArrayList*  
<dhbk.maas.hadoop.monitor.obj.ReMngClusterApp>

**getClusterApp** (String appId) throws *ClientProtocolException*, *IOException*, *JSONException*

- Get an object ReMngClusterApp
- Return dnbk.maas.hadoop.monitor.obj.ReMngClusterApp

**Field Summary :**

```
private static final String HTTP ;
private static final String REMNG_CLUSTER_APPS_PATH ;

/* Attributes of resource cluster applications */
public static final String REMNG_CLUSTER_APP_FINISHEDTIME ;
public static final String REMNG_CLUSTER_APP_AMCONTAINERLOGS ;
public static final String REMNG_CLUSTER_APP_TRACKINGUI ;
public static final String REMNG_CLUSTER_APP_STATE ;
public static final String REMNG_CLUSTER_APP_USER ;
public static final String REMNG_CLUSTER_APP_ID ;
public static final String REMNG_CLUSTER_APP_CLUSTERID ;
public static final String REMNG_CLUSTER_APP_FINALSTATUS ;
public static final String REMNG_CLUSTER_APP_AMHOSTHTTPADDRESS ;
public static final String REMNG_CLUSTER_APP_PROGRESS ;
public static final String REMNG_CLUSTER_APP_NAME ;
public static final String REMNG_CLUSTER_APP_STARTEDTIME ;
public static final String REMNG_CLUSTER_APP_ELAPSEDTIME ;
public static final String REMNG_CLUSTER_APP_DIAGNOSTICS ;
public static final String REMNG_CLUSTER_APP_TRACKINGURL ;
public static final String REMNG_CLUSTER_APP_QUEUE ;
public static final String REMNG_CLUSTER_APP_ALLOCATEDMB ;
public static final String REMNG_CLUSTER_APP_ALLOCATEDVCORES;
public static final String REMNG_CLUSTER_APP_RUNNINGCONTAINERS;

private static final String DEFAULT_PORT = "8088";

private String url;
private String address;
private String port = DEFAULT_PORT;
```

**### Class HDFSManage**

**\*\*** Manage resource hdfs

**Constructor Summary :**

**HDFSManage** (String address) : Constructs a new object manage history with address host is address and port will take value **DEFAULTL\_PORT**

**HDFSManage** (*String address, String port*) : Constructs a new object manage history with address host is *address* and port is *port*

**Method Summary :**

**getListADirectory** (*String path*) throws *JSONException, ClientProtocolException, IOException*

- Get list files & directory with parameter path is *path* in HDFS
- Return *ArrayList*  
<dhbk.maas.hadoop.monitor.obj.ListADirectory>

## dhbk.maas.api.hadoop.monitor.obj

\*\*\* Include many objects are managed on hadoop

### ### Class HistoryJob

\*\* manage object job on hadoop

**Constructor Summary :**

**HistoryJob** (*String submitTime, String state, String user, String reducesToal, String mapsCompleted, String startTime, String id, String name, String reducesCompleted, String mapsTotal, String queue, String finish*) :  
// Constructs a new object history job with informations attributes

**Field Summary :**

```
public String submitTime;           // time submit job
public String state;                 // state job
public String user;                  // user call job
public String reducestotal;
public String mapscompleted;
public String starttime;
public String id;
public String name;
public String reducescompleted;
public String mapstotal;
public String queue;
public String finishtime;
```

### ### Class HistoryInfo

\*\* History server information

**Constructor Summary :**

*HistoryInfo (String startedOn, String hadoopVersionBuiltOn,  
String hadoopBuiltVersion, String hadoopVersion)*

**Field Summary :**

*public String startedOn;  
public String hadoopVersionBuiltOn;  
public String hadoopBuiltVersion;  
public String hadoopVersion;*

### ### Class HistoryJobTask

\*\* Manage job task

**Constructor Summary :**

*HistoryJobTask (String progress, String elapsedTime, String  
state, String startTime, String id, String type, String  
successfulAttempt, String finishTime)*

**Field Summary :**

*public String progress;  
public String elapsedTime;  
public String state;  
public String startTime;  
public String id;  
public String type;  
public String successfulAttempt;  
public String finishTime;*

### ### Class ReMngClusterApp

\*\* Manage applications on cluster

**Constructor Summary :**

```
ReMngClusterApp (String finishedTime, String amContainerLogs,  
String trackingUI, String state, String user, String id,  
String clusterId, String finalStatus, String  
amHostHttpAddress, String progress,String name, String  
startedTime, String elapsedTime, String diagnostics, String  
trackingUrl, String queue, String allocatedMB, String  
allocatedVCores, String runningContainers)
```

**Field Summary :**

```
public String finishedTime;  
public String amContainerLogs;  
public String trackingUI;  
public String state;  
public String user;  
public String id;  
public String clusterId;  
public String finalStatus;  
public String amHostHttpAddress;  
public String progress;  
public String name;  
public String startedTime;  
public String elapsedTime;  
public String diagnostics;  
public String trackingUrl;  
public String queue;  
public String allocatedMB;  
public String allocatedVCores;  
public String runningContainers;
```

**### Class ListADirectory**

**\*\*** Manage applications on cluster

**Constructor Summary :**

```
ListADirectory (String accessTime, String blockSize, String  
group, String length, String modificationTime, String owner,  
String pathSuffix, String permission, String replication,  
String type)
```

**Field Summary :**

```
public String accessTime ;
```



```
public String blockSize ;  
public String group ;  
public String length ;  
public String modificationTime ;  
public String owner ;  
public String pathSuffix ;  
public String permission ;  
public String replication ;  
public String type ;
```

## dhbk.maas.api.mahout.excute

\*\*\* Send request to excute mahout 's jobs

### ### Class Classification

\*\* implementation machine learning Classification

### ### Class Clustering

\*\* implementation machine learning Clustering

### ### Class Recommendations

\*\* implementation machine learning Recommendations

#### Constructor Summary :

*Recommendations (String address)* : Constructs a new object manage history with address host is address and port will take value *DEFAULTL\_PORT*

*Recommendations (String address, String port)*: Constructs a new object manage history with address host is address and port is port

#### Method Summary :

*public String submitRecommender () throws ClientProtocolException, IOException*

- Get result algorithm Recommender of Mahout on Server
- Return String result is *SUCCESS* if execute successfully  
is *FAILURE* if execute failure

**Field Summary :**

```
private String url ;           // URL connection  
private String address ;      // address host name  
private String port ; // port conection, initialized DEFAULT_PORT  
  
private static final String HISTORY_JOB_PATH; // Default path  
private static final String DEFAULT_PORT;    // Default port
```