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org.apache.hadoop.mapreduce

Class Job

```
java.lang.Object
  org.apache.hadoop.mapreduce.task.JobContextImpl
    org.apache.hadoop.mapreduce.Job
```

All Implemented Interfaces:

JobContext, org.apache.hadoop.mapreduce.MRJobConfig

```
@InterfaceAudience.Public
@InterfaceStability.Evolving
public class Job
  extends org.apache.hadoop.mapreduce.task.JobContextImpl
  implements JobContext
```

The job submitter's view of the Job.

It allows the user to configure the job, submit it, control its execution, and query the state. The set methods only work until the job is submitted, afterwards they will throw an IllegalStateException.

Normally the user creates the application, describes various facets of the job via Job and then submits the job and monitor its progress.

Here is an example on how to submit a job:

```
// Create a new Job
Job job = Job.getInstance();
job.setJarByClass(MyJob.class);

// Specify various job-specific parameters
job.setJobName("myjob");

job.setInputPath(new Path("in"));
job.setOutputPath(new Path("out"));

job.setMapperClass(MyJob.MyMapper.class);
job.setReducerClass(MyJob.MyReducer.class);

// Submit the job, then poll for progress until the job is complete
job.waitForCompletion(true);
```

Field Summary

Fields

Modifier and Type	Field and Description
static String	COMPLETION_POLL_INTERVAL_KEY Key in mapred-*.xml that sets completionPollIntervalMillis
static int	DEFAULT_SUBMIT_REPLICATION
static String	OUTPUT_FILTER
static String	PROGRESS_MONITOR_POLL_INTERVAL_KEY Key in mapred-*.xml that sets progMonitorPollIntervalMillis
static String	SUBMIT_REPLICATION
static String	USED_GENERIC_PARSER

Fields inherited from class org.apache.hadoop.mapreduce.task.JobContextImpl

conf, credentials, ugi

Fields inherited from interface org.apache.hadoop.mapreduce.MRJobConfig

AM_NODE_LABEL_EXP, APPLICATION_ATTEMPT_ID, APPLICATION_MASTER_CLASS, CACHE_ARCHIVES, CACHE_ARCHIVES_SIZES, CACHE_ARCHIVES_TIMESTAMPS, CACHE_ARCHIVES_VISIBILITIES, CACHE_FILE_TIMESTAMPS, CACHE_FILE_VISIBILITIES, CACHE_FILES, CACHE_FILES_SIZES, CACHE_LOCALARCHIVES, CACHE_LOCALFILES, CACHE_SYMLINK, CLASSPATH_ARCHIVES, CLASSPATH_FILES, COMBINE_CLASS_ATTR, COMBINE_RECORDS_BEFORE_PROGRESS, COMBINER_GROUP_COMPARATOR_CLASS, COMPLETED_MAPS_FOR_REDUCE_SLOWSTART, COUNTER_GROUP_NAME_MAX_DEFAULT, COUNTER_GROUP_NAME_MAX_KEY, COUNTER_GROUPS_MAX_DEFAULT, COUNTER_GROUPS_MAX_KEY, COUNTER_NAME_MAX_DEFAULT, COUNTER_NAME_MAX_KEY, COUNTERS_MAX_DEFAULT, COUNTERS_MAX_KEY, DEFAULT_FINISH_JOB_WHEN_REDUCERS_DONE, DEFAULT_JOB_ACL_MODIFY_JOB, DEFAULT_JOB_ACL_VIEW_JOB, DEFAULT_JOB_AM_ACCESS_DISABLED, DEFAULT_JOB_RUNNING_MAP_LIMIT, DEFAULT_JOB_RUNNING_REDUCE_LIMIT, DEFAULT_JOB_TOKEN_TRACKING_IDS_ENABLED, DEFAULT_LOG_LEVEL, DEFAULT_MAP_CPU_VCORES, DEFAULT_MAP_MEMORY_MB, DEFAULT_MAPRED_ADMIN_JAVA_OPTS, DEFAULT_MAPRED_ADMIN_USER_ENV, DEFAULT_MAPREDUCE_APPLICATION_CLASSPATH, DEFAULT_MAPREDUCE_CROSS_PLATFORM_APPLICATION_CLASSPATH, DEFAULT_MAPREDUCE_JOB_EMIT_TIMELINE_DATA, DEFAULT_MAX_ALLOWED_FETCH_FAILURES_FRACTION, DEFAULT_MAX_FETCH_FAILURES_NOTIFICATIONS, DEFAULT_MAX_SHUFFLE_FETCH_HOST_FAILURES, DEFAULT_MAX_SHUFFLE_FETCH_RETRY_DELAY, DEFAULT_MR_AM_ADMIN_COMMAND_OPTS, DEFAULT_MR_AM_ADMIN_USER_ENV, DEFAULT_MR_AM_COMMAND_OPTS, DEFAULT_MR_AM_COMMIT_WINDOW_MS, DEFAULT_MR_AM_COMMITTER_CANCEL_TIMEOUT_MS, DEFAULT_MR_AM_CONTAINERLAUNCHER_THREAD_COUNT_LIMIT, DEFAULT_MR_AM_CONTAINERLAUNCHER_THREADPOOL_INITIAL_SIZE, DEFAULT_MR_AM_CPU_VCORES, DEFAULT_MR_AM_HARD_KILL_TIMEOUT_MS, DEFAULT_MR_AM_HISTORY_COMPLETE_EVENT_FLUSH_TIMEOUT_MS, DEFAULT_MR_AM_HISTORY_JOB_COMPLETE_UNFLUSHED_MULTIPLIER, DEFAULT_MR_AM_HISTORY_MAX_UNFLUSHED_COMPLETE_EVENTS, DEFAULT_MR_AM_HISTORY_USE_BATCHED_FLUSH_QUEUE_SIZE_THRESHOLD, DEFAULT_MR_AM_IGNORE_BLACKLISTING_BLACKLISTED_NODE_PERCENT, DEFAULT_MR_AM_JOB_CLIENT_THREAD_COUNT, DEFAULT_MR_AM_JOB_REDUCE_PREEMPTION_LIMIT, DEFAULT_MR_AM_JOB_REDUCE_RAMP_UP_LIMIT, DEFAULT_MR_AM_LOG_BACKUPS, DEFAULT_MR_AM_LOG_KB, DEFAULT_MR_AM_LOG_LEVEL, DEFAULT_MR_AM_MAX_ATTEMPTS, DEFAULT_MR_AM_NUM_PROGRESS_SPLITS, DEFAULT_MR_AM_PROFILE, DEFAULT_MR_AM_STAGING_DIR, DEFAULT_MR_AM_TASK_ESTIMATOR_SMOOTH_LAMBDA_MS, DEFAULT_MR_AM_TASK_LISTENER_THREAD_COUNT, DEFAULT_MR_AM_TO_RM_HEARTBEAT_INTERVAL_MS, DEFAULT_MR_AM_TO_RM_WAIT_INTERVAL_MS, DEFAULT_MR_AM_VMEM_MB, DEFAULT_MR_CLIENT_JOB_MAX_RETRIES, DEFAULT_MR_CLIENT_JOB_RETRY_INTERVAL, DEFAULT_MR_CLIENT_MAX_RETRIES, DEFAULT_MR_CLIENT_TO_AM_IPC_MAX_RETRIES, DEFAULT_MR_CLIENT_TO_AM_IPC_MAX_RETRIES_ON_TIMEOUTS, DEFAULT_MR_ENCRYPTED_INTERMEDIATE_DATA, DEFAULT_MR_ENCRYPTED_INTERMEDIATE_DATA_BUFFER_KB, DEFAULT_MR_ENCRYPTED_INTERMEDIATE_DATA_KEY_SIZE_BITS, DEFAULT_MR_JOB_END_NOTIFICATION_TIMEOUT, DEFAULT_MR_JOB_REDUCER_PREEMPT_DELAY_SEC, DEFAULT_MR_JOB_REDUCER_UNCONDITIONAL_PREEMPT_DELAY_SEC, DEFAULT_REDUCE_CPU_VCORES, DEFAULT_REDUCE_MEMORY_MB, DEFAULT_REDUCE_SEPARATE_SHUFFLE_LOG, DEFAULT_SHELL, DEFAULT_SHUFFLE_FETCH_RETRY_INTERVAL_MS, DEFAULT_SHUFFLE_INPUT_BUFFER_PERCENT, DEFAULT_SHUFFLE_LOG_BACKUPS, DEFAULT_SHUFFLE_LOG_KB, DEFAULT_SPECULATIVE_MINIMUM_ALLOWED_TASKS, DEFAULT_SPECULATIVE_RETRY_AFTER_NO_SPECULATE, DEFAULT_SPECULATIVE_RETRY_AFTER_SPECULATE, DEFAULT_SPECULATIVECAP_RUNNING_TASKS, DEFAULT_SPECULATIVECAP_TOTAL_TASKS, DEFAULT_SPLIT_METAINFO_MAXSIZE, DEFAULT_TASK_ISMAP, DEFAULT_TASK_LOG_BACKUPS, DEFAULT_TASK_PROFILE_PARAMS, FINISH_JOB_WHEN_REDUCERS_DONE, GROUP_COMPARATOR_CLASS, HADOOP_WORK_DIR, ID, INDEX_CACHE_MEMORY_LIMIT, INPUT_FORMAT_CLASS_ATTR, IO_SORT_FACTOR, IO_SORT_MB, JAR, JAR_UNPACK_PATTERN, JOB_ACL MODIFY_JOB, JOB_ACL_VIEW_JOB, JOB_AM_ACCESS_DISABLED, JOB_CANCEL_DELEGATION_TOKEN, JOB_CONF_FILE, JOB_JAR, JOB_JOBTRACKER_ID, JOB_LOCAL_DIR, JOB_NAME, JOB_NAMENODES, JOB_NODE_LABEL_EXP, JOB_RUNNING_MAP_LIMIT, JOB_RUNNING_REDUCE_LIMIT, JOB_SPLIT, JOB_SPLIT_METAINFO, JOB_SUBMIT_DIR, JOB_SUBMITHOST, JOB_SUBMITHOSTADDR, JOB_TAGS, JOB_TOKEN_TRACKING_IDS, JOB_TOKEN_TRACKING_IDS_ENABLED, JOB_UBERTASK_ENABLE, JOB_UBERTASK_MAXBYTES, JOB_UBERTASK_MAXMAPS, JOB_UBERTASK_MAXREDUCES, JVM_NUMTASKS_TORUN, KEY_COMPARATOR, MAP_CLASS_ATTR, MAP_COMBINE_MIN_SPILLS, MAP_CPU_VCORES, MAP_DEBUG_SCRIPT, MAP_ENV, MAP_FAILURES_MAX_PERCENT, MAP_INPUT_FILE, MAP_INPUT_PATH, MAP_INPUT_START, MAP_JAVA_OPTS, MAP_LOG_LEVEL, MAP_MAX_ATTEMPTS, MAP_MEMORY_MB, MAP_NODE_LABEL_EXP, MAP_OUTPUT_COLLECTOR_CLASS_ATTR, MAP_OUTPUT_COMPRESS, MAP_OUTPUT_COMPRESS_CODEC, MAP_OUTPUT_KEY_CLASS, MAP_OUTPUT_KEY_FIELD_SEPARATOR, MAP_OUTPUT_VALUE_CLASS, MAP_SKIP_INCR_PROC_COUNT, MAP_SKIP_MAX_RECORDS, MAP_SORT_SPILL_PERCENT, MAP_SPECULATIVE, MAPRED_ADMIN_USER_ENV, MAPRED_ADMIN_USER_SHELL, MAPRED_MAP_ADMIN_JAVA_OPTS, MAPRED_REDUCE_ADMIN_JAVA_OPTS, MAPREDUCE_APPLICATION_CLASSPATH, MAPREDUCE_APPLICATION_FRAMEWORK_PATH, MAPREDUCE_JOB_CLASSLOADER, MAPREDUCE_JOB_CLASSLOADER_SYSTEM_CLASSES, MAPREDUCE_JOB_CREDENTIALS_BINARY, MAPREDUCE_JOB_DIR, MAPREDUCE_JOB_EMIT_TIMELINE_DATA, MAPREDUCE_JOB_LOG4J_PROPERTIES_FILE, MAPREDUCE_JOB_SHUFFLE_PROVIDER_SERVICES, MAPREDUCE_JOB_USER_CLASSPATH_FIRST, MAPREDUCE_V2_CHILD_CLASS, MAX_ALLOWED_FETCH_FAILURES_FRACTION, MAX_FETCH_FAILURES_NOTIFICATIONS, MAX_SHUFFLE_FETCH_HOST_FAILURES, MAX_SHUFFLE_FETCH_RETRY_DELAY, MAX_TASK_FAILURES_PER_TRACKER, MR_AM_ADMIN_COMMAND_OPTS, MR_AM_ADMIN_USER_ENV, MR_AM_COMMAND_OPTS, MR_AM_COMMIT_WINDOW_MS, MR_AM_COMMITTER_CANCEL_TIMEOUT_MS, MR_AM_CONTAINERLAUNCHER_THREAD_COUNT_LIMIT, MR_AM_CONTAINERLAUNCHER_THREADPOOL_INITIAL_SIZE, MR_AM_CPU_VCORES, MR_AM_CREATE_JH_INTERMEDIATE_BASE_DIR, MR_AM_ENV, MR_AM_HARD_KILL_TIMEOUT_MS, MR_AM_HISTORY_COMPLETE_EVENT_FLUSH_TIMEOUT_MS, MR_AM_HISTORY_JOB_COMPLETE_UNFLUSHED_MULTIPLIER, MR_AM_HISTORY_MAX_UNFLUSHED_COMPLETE_EVENTS, MR_AM_HISTORY_USE_BATCHED_FLUSH_QUEUE_SIZE_THRESHOLD, MR_AM_IGNORE_BLACKLISTING_BLACKLISTED_NODE_PERESENT, MR_AM_JOB_CLIENT_PORT_RANGE, MR_AM_JOB_CLIENT_THREAD_COUNT, MR_AM_JOB_NODE_BLACKLISTING_ENABLE, MR_AM_JOB_RECOVERY_ENABLE, MR_AM_JOB_RECOVERY_ENABLE_DEFAULT, MR_AM_JOB_REDUCE_PREEMPTION_LIMIT, MR_AM_JOB_REDUCE_RAMPUP_UP_LIMIT, MR_AM_JOB_SPECULATOR, MR_AM_LOG_BACKUPS, MR_AM_LOG_KB, MR_AM_LOG_LEVEL, MR_AM_MAX_ATTEMPTS, MR_AM_NUM_PROGRESS_SPLITS, MR_AM_PREFIX, MR_AM_PROFILE, MR_AM_PROFILE_PARAMS, MR_AM_SECURITY_SERVICE_AUTHORIZATION_CLIENT, MR_AM_SECURITY_SERVICE_AUTHORIZATION_TASK_UMBILICAL, MR_AM_STAGING_DIR, MR_AM_TASK_ESTIMATOR, MR_AM_TASK_ESTIMATOR_EXPONENTIAL_RATE_ENABLE, MR_AM_TASK_ESTIMATOR_SMOOTH_LAMBDA_MS, MR_AM_TASK_LISTENER_THREAD_COUNT, MR_AM_TO_RM_HEARTBEAT_INTERVAL_MS, MR_AM_TO_RM_WAIT_INTERVAL_MS, MR_AM_VMEM_MB, MR_APPLICATION_TYPE, MR_CLIENT_JOB_MAX_RETRIES,

```
MR_CLIENT_JOB_RETRY_INTERVAL, MR_CLIENT_MAX_RETRIES, MR_CLIENT_TO_AM_IPC_MAX_RETRIES,
MR_CLIENT_TO_AM_IPC_MAX_RETRIES_ON_TIMEOUTS, MR_ENCRYPTED_INTERMEDIATE_DATA,
MR_ENCRYPTED_INTERMEDIATE_DATA_BUFFER_KB, MR_ENCRYPTED_INTERMEDIATE_DATA_KEY_SIZE_BITS,
MR_JOB_END_NOTIFICATION_MAX_ATTEMPTS, MR_JOB_END_NOTIFICATION_MAX_RETRY_INTERVAL,
MR_JOB_END_NOTIFICATION_PROXY, MR_JOB_END_NOTIFICATION_TIMEOUT, MR_JOB_END_NOTIFICATION_URL,
MR_JOB_END_RETRY_ATTEMPTS, MR_JOB_END_RETRY_INTERVAL, MR_JOB_REDACTED_PROPERTIES,
MR_JOB_REDUCER_PREEMPT_DELAY_SEC, MR_JOB_REDUCER_UNCONDITIONAL_PREEMPT_DELAY_SEC, MR_PREFIX, NUM_MAP_PROFILES,
NUM_MAPS, NUM_REDUCE_PROFILES, NUM_REDUCES, OUTPUT, OUTPUT_FORMAT_CLASS_ATTR, OUTPUT_KEY_CLASS,
OUTPUT_VALUE_CLASS, PARTITIONER_CLASS_ATTR, PRESERVE_FAILED_TASK_FILES, PRESERVE_FILES_PATTERN, PRIORITY,
QUEUE_NAME, RECORDS_BEFORE_PROGRESS, REDUCE_CLASS_ATTR, REDUCE_CPU_VCORES, REDUCE_DEBUG_SCRIPT, REDUCE_ENV,
REDUCE_FAILURES_MAXPERCENT, REDUCE_INPUT_BUFFER_PERCENT, REDUCE_JAVA_OPTS, REDUCE_LOG_LEVEL,
REDUCE_MARKRESET_BUFFER_PERCENT, REDUCE_MARKRESET_BUFFER_SIZE, REDUCE_MAX_ATTEMPTS, REDUCE_MEMORY_MB,
REDUCE_MEMORY_TOTAL_BYTES, REDUCE_MEMTOMEM_ENABLED, REDUCE_MEMTOMEM_THRESHOLD, REDUCE_MERGE_INMEM_THRESHOLD,
REDUCE_NODE_LABEL_EXP, REDUCE_SEPARATE_SHUFFLE_LOG, REDUCE_SKIP_INCR_PROC_COUNT, REDUCE_SKIP_MAXGROUPS,
REDUCE_SPECULATIVE, RESERVATION_ID, SETUP_CLEANUP_NEEDED, SHUFFLE_CONNECT_TIMEOUT, SHUFFLE_FETCH_FAILURES,
SHUFFLE_FETCH_RETRY_ENABLED, SHUFFLE_FETCH_RETRY_INTERVAL_MS, SHUFFLE_FETCH_RETRY_TIMEOUT_MS,
SHUFFLE_INPUT_BUFFER_PERCENT, SHUFFLE_LOG_BACKUPS, SHUFFLE_LOG_KB, SHUFFLE_MEMORY_LIMIT_PERCENT,
SHUFFLE_MERGE_PERCENT, SHUFFLE_NOTIFY_READERROR, SHUFFLE_PARALLEL_COPIES, SHUFFLE_READ_TIMEOUT, SKIP_OUTDIR,
SKIP_RECORDS, SKIP_START_ATTEMPTS, SPECULATIVE_MINIMUM_ALLOWED_TASKS, SPECULATIVE_RETRY_AFTER_NO_SPECULATE,
SPECULATIVE_RETRY_AFTER_SPECULATE, SPECULATIVE_SLOWNODE_THRESHOLD, SPECULATIVE_SLOWTASK_THRESHOLD,
SPECULATIVECAP, SPECULATIVECAP_RUNNING_TASKS, SPECULATIVECAP_TOTAL_TASKS, SPLIT_FILE, SPLIT_METAINFO_MAXSIZE,
STDERR_LOGFILE_ENV, STDOUT_LOGFILE_ENV, TASK_ATTEMPT_ID, TASK_CLEANUP_NEEDED, TASK_DEBUGOUT_LINES, TASK_ID,
TASK_ISMAP, TASK_LOG_BACKUPS, TASK_MAP_PROFILE_PARAMS, TASK_OUTPUT_DIR, TASK_PARTITION, TASK_PROFILE,
TASK_PROFILE_PARAMS, TASK_REDUCE_PROFILE_PARAMS, TASK_TIMEOUT, TASK_TIMEOUT_CHECK_INTERVAL_MS,
TASK_USERLOG_LIMIT, USER_LOG_RETAIN_HOURS, USER_NAME, WORKDIR, WORKFLOW_ADJACENCY_PREFIX_PATTERN,
WORKFLOW_ADJACENCY_PREFIX_STRING, WORKFLOW_ID, WORKFLOW_NAME, WORKFLOW_NODE_NAME, WORKFLOW_TAGS, WORKING_DIR
```

Constructor Summary

Constructors

Constructor and Description

`Job()`

Deprecated.

Use `getInstance()`

`Job(Configuration conf)`

Deprecated.

Use `getInstance(Configuration)`

`Job(Configuration conf, String jobName)`

Deprecated.

Use `getInstance(Configuration, String)`

Method Summary

All Methods Static Methods Instance Methods Concrete Methods Deprecated Methods

Modifier and Type

`void`

Method and Description

`addArchiveToClassPath(Path archive)`

Add an archive path to the current set of classpath entries.

`void`

`addCacheArchive(URI uri)`

Add a archives to be localized

`void`

`addCacheFile(URI uri)`

Add a file to be localized

`void`

`addFileToClassPath(Path file)`

Add an file path to the current set of classpath entries It adds the file to cache as well.

`float`

`cleanupProgress()`

Get the *progress* of the job's cleanup-tasks, as a float between 0.0 and 1.0.

void	<code>createSymlink()</code>
	Deprecated.
void	<code>failTask(TaskAttemptID taskId)</code>
	Fail indicated task attempt.
static int	<code>getCompletionPollInterval(Configuration conf)</code>
	The interval at which waitForCompletion() should check.
Counters	<code>getCounters()</code>
	Gets the counters for this job.
long	<code>getFinishTime()</code>
	Get finish time of the job.
String	<code>getHistoryUrl()</code>
static Job	<code>getInstance()</code>
	Creates a new Job with no particular Cluster .
static Job	<code>getInstance(Cluster ignored)</code>
	Deprecated.
	Use <code>getInstance()</code>
static Job	<code>getInstance(Cluster ignored, Configuration conf)</code>
	Deprecated.
	Use <code>getInstance(Configuration)</code>
static Job	<code>getInstance(Configuration conf)</code>
	Creates a new Job with no particular Cluster and a given Configuration .
static Job	<code>getInstance(Configuration conf, String jobName)</code>
	Creates a new Job with no particular Cluster and a given jobName.
static Job	<code>getInstance(JobStatus status, Configuration conf)</code>
	Creates a new Job with no particular Cluster and given Configuration and JobStatus .
String	<code>getJobFile()</code>
	Get the path of the submitted job configuration.
String	<code>getJobName()</code>
	The user-specified job name.
org.apache.hadoop.mapreduce.JobStatus.State	<code>getJobState()</code>
	Returns the current state of the Job.
JobPriority	<code>getPriority()</code>
	Get scheduling info of the job.
static int	<code>getProgressPollInterval(Configuration conf)</code>
	The interval at which monitorAndPrintJob() prints status
ReservationId	<code>getReservationId()</code>
	Get the reservation to which the job is submitted to, if any
String	<code>getSchedulingInfo()</code>
	Get scheduling info of the job.
long	<code>getStartTime()</code>
	Get start time of the job.
JobStatus	<code>getStatus()</code>
TaskCompletionEvent[]	<code>getTaskCompletionEvents(int startFrom)</code>
	Get events indicating completion (success/failure) of component tasks.
TaskCompletionEvent[]	<code>getTaskCompletionEvents(int startFrom, int numEvents)</code>
	Get events indicating completion (success/failure) of component tasks.
String[]	<code>getTaskDiagnostics(TaskAttemptID taskid)</code>
	Gets the diagnostic messages for a given task attempt.
static org.apache.hadoop.mapreduce.Job.TaskStatusFilter	<code>getTaskOutputFilter(Configuration conf)</code>

	Get the task output filter.
org.apache.hadoop.mapreduce.TaskReport[]	getTaskReports(TaskType type) Get the information of the current state of the tasks of a job.
String	getTrackingURL() Get the URL where some job progress information will be displayed.
boolean	isComplete() Check if the job is finished or not.
boolean	isRetired()
boolean	isSuccessful() Check if the job completed successfully.
boolean	isUber()
void	killJob() Kill the running job.
void	killTask(TaskAttemptID taskId) Kill indicated task attempt.
float	mapProgress() Get the <i>progress</i> of the job's map-tasks, as a float between 0.0 and 1.0.
boolean	monitorAndPrintJob() Monitor a job and print status in real-time as progress is made and tasks fail.
float	reduceProgress() Get the <i>progress</i> of the job's reduce-tasks, as a float between 0.0 and 1.0.
void	setCacheArchives(URI[] archives) Set the given set of archives
void	setCacheFiles(URI[] files) Set the given set of files
void	setCancelDelegationTokenUponJobCompletion(boolean value) Sets the flag that will allow the JobTracker to cancel the HDFS delegation tokens upon job completion.
void	setCombinerClass(Class<? extends Reducer> cls) Set the combiner class for the job.
void	setCombinerKeyGroupingComparatorClass(Class<? extends RawComparator> cls) Define the comparator that controls which keys are grouped together for a single call to combiner, Reducer.reduce(Object, Iterable, org.apache.hadoop.mapreduce.Reducer.Context)
void	setGroupingComparatorClass(Class<? extends RawComparator> cls) Define the comparator that controls which keys are grouped together for a single call to Reducer.reduce(Object, Iterable, org.apache.hadoop.mapreduce.Reducer.Context)
void	setInputFormatClass(Class<? extends InputFormat> cls) Set the InputFormat for the job.
void	setJar(String jar) Set the job jar
void	setJarByClass(Class<?> cls) Set the Jar by finding where a given class came from.
void	setJobName(String name) Set the user-specified job name.
void	setJobSetupCleanupNeeded(boolean needed) Specify whether job-setup and job-cleanup is needed for the job

```

void                                         setMapOutputKeyClass(Class<?> theClass)
Set the key class for the map output data.

void                                         setMapOutputValueClass(Class<?> theClass)
Set the value class for the map output data.

void                                         setMapperClass(Class<? extends Mapper> cls)
Set the Mapper for the job.

void                                         setMapSpeculativeExecution(boolean speculativeExecution)
Turn speculative execution on or off for this job for map tasks.

void                                         setMaxMapAttempts(int n)
Expert: Set the number of maximum attempts that will be made to run
a map task.

void                                         setMaxReduceAttempts(int n)
Expert: Set the number of maximum attempts that will be made to run
a reduce task.

void                                         setNumReduceTasks(int tasks)
Set the number of reduce tasks for the job.

void                                         setOutputFormatClass(Class<? extends OutputFormat> cls)
Set the OutputFormat for the job.

void                                         setOutputKeyClass(Class<?> theClass)
Set the key class for the job output data.

void                                         setOutputValueClass(Class<?> theClass)
Set the value class for job outputs.

void                                         setPartitionerClass(Class<? extends Partitioner> cls)
Set the Partitioner for the job.

void                                         setPriority(JobPriority priority)
Set the priority of a running job.

void                                         setProfileEnabled(boolean newValue)
Set whether the system should collect profiler information for some of
the tasks in this job? The information is stored in the user log directory.

void                                         setProfileParams(String value)
Set the profiler configuration arguments.

void                                         setProfileTaskRange(boolean isMap, String newValue)
Set the ranges of maps or reduces to profile.

void                                         setReducerClass(Class<? extends Reducer> cls)
Set the Reducer for the job.

void                                         setReduceSpeculativeExecution(boolean speculativeExecution)
Turn speculative execution on or off for this job for reduce tasks.

void                                         setReservationId(ReservationId reservationId)
Set the reservation to which the job is submitted to

void                                         setSortComparatorClass(Class<? extends RawComparator> cls)
Define the comparator that controls how the keys are sorted before they
are passed to the Reducer.

void                                         setSpeculativeExecution(boolean speculativeExecution)
Turn speculative execution on or off for this job.

static void                                setTaskOutputFilter(Configuration conf,
org.apache.hadoop.mapreduce.Job.TaskStatusFilter newValue)
Modify the Configuration to set the task output filter.

float                                       setupProgress()
Get the progress of the job's setup-tasks, as a float between 0.0 and 1.0.

void                                         setUser(String user)
Set the reported username for this job.

void                                         setWorkingDirectory(Path dir)

```

Set the current working directory for the default file system.

<code>void</code>	<code>submit()</code>
	Submit the job to the cluster and return immediately.
<code>String</code>	<code>toString()</code>
	Dump stats to screen.
<code>boolean</code>	<code>waitForCompletion(boolean verbose)</code>
	Submit the job to the cluster and wait for it to finish.

Methods inherited from class org.apache.hadoop.mapreduce.task.JobContextImpl

`getArchiveClassPaths`, `getArchiveTimestamps`, `getCacheArchives`, `getCacheFiles`, `getCombinerClass`, `getCombinerKeyGroupingComparator`, `getConfiguration`, `getCredentials`, `getFileClassPaths`, `getFileTimestamps`, `getGroupingComparator`, `getInputFormatClass`, `getJar`, `getJobID`, `getJobSetupCleanupNeeded`, `getLocalCacheArchives`, `getLocalCacheFiles`, `getMapOutputKeyClass`, `getMapOutputValueClass`, `getMapperClass`, `getMaxMapAttempts`, `getMaxReduceAttempts`, `getNumReduceTasks`, `getOutputFormatClass`, `getOutputKeyClass`, `getOutputValueClass`, `getPartitionerClass`, `getProfileEnabled`, `getProfileParams`, `getProfileTaskRange`, `getReducerClass`, `getSortComparator`, `getSymlink`, `getTaskCleanupNeeded`, `getUser`, `getWorkingDirectory`, `setJobID`

Methods inherited from class java.lang.Object

`clone`, `equals`, `finalize`, `getClass`, `hashCode`, `notify`, `notifyAll`, `wait`, `wait`, `wait`

Methods inherited from interface org.apache.hadoop.mapreduce.JobContext

`getArchiveClassPaths`, `getArchiveTimestamps`, `getCacheArchives`, `getCacheFiles`, `getCombinerClass`, `getCombinerKeyGroupingComparator`, `getConfiguration`, `getCredentials`, `getFileClassPaths`, `getFileTimestamps`, `getGroupingComparator`, `getInputFormatClass`, `getJar`, `getJobID`, `getJobSetupCleanupNeeded`, `getLocalCacheArchives`, `getLocalCacheFiles`, `getMapOutputKeyClass`, `getMapOutputValueClass`, `getMapperClass`, `getMaxMapAttempts`, `getMaxReduceAttempts`, `getNumReduceTasks`, `getOutputFormatClass`, `getOutputKeyClass`, `getOutputValueClass`, `getPartitionerClass`, `getProfileEnabled`, `getProfileParams`, `getProfileTaskRange`, `getReducerClass`, `getSortComparator`, `getSymlink`, `getTaskCleanupNeeded`, `getUser`, `getWorkingDirectory`

Field Detail

OUTPUT_FILTER

`public static final String OUTPUT_FILTER`

See Also:

[Constant Field Values](#)

COMPLETION_POLL_INTERVAL_KEY

`public static final String COMPLETION_POLL_INTERVAL_KEY`

Key in mapred-*.xml that sets completionPollInvervalMillis

See Also:

[Constant Field Values](#)

PROGRESS_MONITOR_POLL_INTERVAL_KEY

`public static final String PROGRESS_MONITOR_POLL_INTERVAL_KEY`

Key in mapred-*.xml that sets progMonitorPollIntervalMillis

See Also:

[Constant Field Values](#)

USED_GENERIC_PARSER

`public static final String USED_GENERIC_PARSER`

See Also:

[Constant Field Values](#)

SUBMIT_REPLICATION

```
public static final String SUBMIT_REPLICATION
```

See Also:

[Constant Field Values](#)

DEFAULT_SUBMIT_REPLICATION

```
public static final int DEFAULT_SUBMIT_REPLICATION
```

See Also:

[Constant Field Values](#)

Constructor Detail

Job

```
@Deprecated  
public Job()  
    throws IOException
```

Deprecated. Use [getInstance\(\)](#)

Throws:

[IOException](#)

Job

```
@Deprecated  
public Job(Configuration conf)  
    throws IOException
```

Deprecated. Use [getInstance\(Configuration\)](#)

Throws:

[IOException](#)

Job

```
@Deprecated  
public Job(Configuration conf,  
            String jobName)  
    throws IOException
```

Deprecated. Use [getInstance\(Configuration, String\)](#)

Throws:

[IOException](#)

Method Detail

getInstance

```
public static Job getInstance()  
    throws IOException
```

Creates a new [Job](#) with no particular [Cluster](#). A Cluster will be created with a generic [Configuration](#).

Returns:

the `Job` , with no connection to a cluster yet.

Throws:

`IOException`

getInstance

```
public static Job getInstance(Configuration conf)
    throws IOException
```

Creates a new `Job` with no particular `Cluster` and a given `Configuration`. The `Job` makes a copy of the `Configuration` so that any necessary internal modifications do not reflect on the incoming parameter. A `Cluster` will be created from the `conf` parameter only when it's needed.

Parameters:

`conf` - the configuration

Returns:

the `Job` , with no connection to a cluster yet.

Throws:

`IOException`

getInstance

```
public static Job getInstance(Configuration conf,
    String jobName)
    throws IOException
```

Creates a new `Job` with no particular `Cluster` and a given `jobName`. A `Cluster` will be created from the `conf` parameter only when it's needed. The `Job` makes a copy of the `Configuration` so that any necessary internal modifications do not reflect on the incoming parameter.

Parameters:

`conf` - the configuration

Returns:

the `Job` , with no connection to a cluster yet.

Throws:

`IOException`

getInstance

```
public static Job getInstance(JobStatus status,
    Configuration conf)
    throws IOException
```

Creates a new `Job` with no particular `Cluster` and given `Configuration` and `JobStatus`. A `Cluster` will be created from the `conf` parameter only when it's needed. The `Job` makes a copy of the `Configuration` so that any necessary internal modifications do not reflect on the incoming parameter.

Parameters:

`status` - job status

`conf` - job configuration

Returns:

the `Job` , with no connection to a cluster yet.

Throws:

`IOException`

getInstance

```
@Deprecated
public static Job getInstance(Cluster ignored)
    throws IOException
```

Deprecated. Use `getInstance()`

Creates a new `Job` with no particular `Cluster`. A Cluster will be created from the `conf` parameter only when it's needed. The `Job` makes a copy of the Configuration so that any necessary internal modifications do not reflect on the incoming parameter.

Parameters:

`ignored` -

Returns:

the `Job` , with no connection to a cluster yet.

Throws:

`IOException`

getInstance

```
@Deprecated
public static Job getInstance(Cluster ignored,
                               Configuration conf)
                               throws IOException
```

Deprecated. Use `getInstance(Configuration)`

Creates a new `Job` with no particular `Cluster` and given `Configuration`. A Cluster will be created from the `conf` parameter only when it's needed. The `Job` makes a copy of the Configuration so that any necessary internal modifications do not reflect on the incoming parameter.

Parameters:

`ignored` -

`conf` - job configuration

Returns:

the `Job` , with no connection to a cluster yet.

Throws:

`IOException`

getStatus

```
public JobStatus getStatus()
                           throws IOException,
                           InterruptedException
```

Throws:

`IOException`

`InterruptedException`

getJobState

```
public org.apache.hadoop.mapreduce.JobStatus.State getJobState()
                           throws IOException,
                           InterruptedException
```

Returns the current state of the Job.

Returns:

`JobStatus#State`

Throws:

`IOException`

`InterruptedException`

getTrackingURL

```
public String getTrackingURL()
```

Get the URL where some job progress information will be displayed.

Returns:

the URL where some job progress information will be displayed.

getJobFile

```
public String getJobFile()
```

Get the path of the submitted job configuration.

Returns:

the path of the submitted job configuration.

getStartTime

```
public long getStartTime()
```

Get start time of the job.

Returns:

the start time of the job

getFinishTime

```
public long getFinishTime()
    throws IOException,
        InterruptedException
```

Get finish time of the job.

Returns:

the finish time of the job

Throws:

IOException

InterruptedException

getSchedulingInfo

```
public String getSchedulingInfo()
```

Get scheduling info of the job.

Returns:

the scheduling info of the job

getPriority

```
public JobPriority getPriority()
    throws IOException,
        InterruptedException
```

Get scheduling info of the job.

Returns:

the scheduling info of the job

Throws:

IOException

InterruptedException

getJobName

```
public String getJobName()
```

The user-specified job name.

Specified by:

```
getJobName in interface JobContext
```

Overrides:

```
getJobName in class org.apache.hadoop.mapreduce.task.JobContextImpl
```

Returns:

the job's name, defaulting to "".

getHistoryUrl

```
public String getHistoryUrl()
    throws IOException,
           InterruptedException
```

Throws:

`IOException`

`InterruptedException`

isRetired

```
public boolean isRetired()
    throws IOException,
           InterruptedException
```

Throws:

`IOException`

`InterruptedException`

toString

```
public String toString()
```

Dump stats to screen.

Overrides:

```
toString in class Object
```

getTaskReports

```
public org.apache.hadoop.mapreduce.TaskReport[] getTaskReports(TaskType type)
    throws IOException,
           InterruptedException
```

Get the information of the current state of the tasks of a job.

Parameters:

`type` - Type of the task

Returns:

the list of all of the map tips.

Throws:

`IOException`

`InterruptedException`

mapProgress

```
public float mapProgress()
    throws IOException
```

Get the *progress* of the job's map-tasks, as a float between 0.0 and 1.0. When all map tasks have completed, the function returns 1.0.

Returns:

the progress of the job's map-tasks.

Throws:

`IOException`**reduceProgress**

```
public float reduceProgress()
    throws IOException
```

Get the *progress* of the job's reduce-tasks, as a float between 0.0 and 1.0. When all reduce tasks have completed, the function returns 1.0.

Returns:

the progress of the job's reduce-tasks.

Throws:`IOException`**cleanupProgress**

```
public float cleanupProgress()
    throws IOException,
        InterruptedException
```

Get the *progress* of the job's cleanup-tasks, as a float between 0.0 and 1.0. When all cleanup tasks have completed, the function returns 1.0.

Returns:

the progress of the job's cleanup-tasks.

Throws:`IOException``InterruptedException`**setupProgress**

```
public float setupProgress()
    throws IOException
```

Get the *progress* of the job's setup-tasks, as a float between 0.0 and 1.0. When all setup tasks have completed, the function returns 1.0.

Returns:

the progress of the job's setup-tasks.

Throws:`IOException`**isComplete**

```
public boolean isComplete()
    throws IOException
```

Check if the job is finished or not. This is a non-blocking call.

Returns:

true if the job is complete, else false.

Throws:`IOException`**isSuccessful**

```
public boolean isSuccessful()
    throws IOException
```

Check if the job completed successfully.

Returns:

true if the job succeeded, else false.

Throws:`IOException`**killJob**

```
public void killJob()
    throws IOException
```

Kill the running job. Blocks until all job tasks have been killed as well. If the job is no longer running, it simply returns.

Throws:`IOException`**setPriority**

```
public void setPriority(JobPriority priority)
    throws IOException,
           InterruptedException
```

Set the priority of a running job.

Parameters:

`priority` - the new priority for the job.

Throws:`IOException``InterruptedException`**getTaskCompletionEvents**

```
public TaskCompletionEvent[] getTaskCompletionEvents(int startFrom,
                                                    int numEvents)
    throws IOException,
           InterruptedException
```

Get events indicating completion (success/failure) of component tasks.

Parameters:

`startFrom` - index to start fetching events from

`numEvents` - number of events to fetch

Returns:

an array of `TaskCompletionEvents`

Throws:`IOException``InterruptedException`**getTaskCompletionEvents**

```
public TaskCompletionEvent[] getTaskCompletionEvents(int startFrom)
    throws IOException
```

Get events indicating completion (success/failure) of component tasks.

Parameters:

`startFrom` - index to start fetching events from

Returns:

an array of `TaskCompletionEvents`

Throws:`IOException`**killTask**

```
public void killTask(TaskAttemptID taskId)
    throws IOException
```

Kill indicated task attempt.

Parameters:

taskId - the id of the task to be terminated.

Throws:

IOException

failTask

```
public void failTask(TaskAttemptID taskId)
    throws IOException
```

Fail indicated task attempt.

Parameters:

taskId - the id of the task to be terminated.

Throws:

IOException

getCounters

```
public Counters getCounters()
    throws IOException
```

Gets the counters for this job. May return null if the job has been retired and the job is no longer in the completed job store.

Returns:

the counters for this job.

Throws:

IOException

getTaskDiagnostics

```
public String[] getTaskDiagnostics(TaskAttemptID taskid)
    throws IOException,
           InterruptedException
```

Gets the diagnostic messages for a given task attempt.

Parameters:

taskid -

Returns:

the list of diagnostic messages for the task

Throws:

IOException

InterruptedException

setNumReduceTasks

```
public void setNumReduceTasks(int tasks)
    throws IllegalStateException
```

Set the number of reduce tasks for the job.

Parameters:

tasks - the number of reduce tasks

Throws:

IllegalStateException - if the job is submitted

setWorkingDirectory

```
public void setWorkingDirectory(Path dir)
                               throws IOException
```

Set the current working directory for the default file system.

Parameters:

dir - the new current working directory.

Throws:

IllegalStateException - if the job is submitted

IOException

setInputFormatClass

```
public void setInputFormatClass(Class<? extends InputFormat> cls)
                               throws IllegalStateException
```

Set the `InputFormat` for the job.

Parameters:

cls - the `InputFormat` to use

Throws:

IllegalStateException - if the job is submitted

setOutputFormatClass

```
public void setOutputFormatClass(Class<? extends OutputFormat> cls)
                               throws IllegalStateException
```

Set the `OutputFormat` for the job.

Parameters:

cls - the `OutputFormat` to use

Throws:

IllegalStateException - if the job is submitted

setMapperClass

```
public void setMapperClass(Class<? extends Mapper> cls)
                           throws IllegalStateException
```

Set the `Mapper` for the job.

Parameters:

cls - the `Mapper` to use

Throws:

IllegalStateException - if the job is submitted

setJarByClass

```
public void setJarByClass(Class<?> cls)
```

Set the Jar by finding where a given class came from.

Parameters:

cls - the example class

setJar

```
public void setJar(String jar)
```

Set the job jar

setUser

```
public void setUser(String user)
```

Set the reported username for this job.

Parameters:

user - the username for this job.

setCombinerClass

```
public void setCombinerClass(Class<? extends Reducer> cls)
    throws IllegalStateException
```

Set the combiner class for the job.

Parameters:

cls - the combiner to use

Throws:

IllegalStateException - if the job is submitted

setReducerClass

```
public void setReducerClass(Class<? extends Reducer> cls)
    throws IllegalStateException
```

Set the Reducer for the job.

Parameters:

cls - the Reducer to use

Throws:

IllegalStateException - if the job is submitted

setPartitionerClass

```
public void setPartitionerClass(Class<? extends Partitioner> cls)
    throws IllegalStateException
```

Set the Partitioner for the job.

Parameters:

cls - the Partitioner to use

Throws:

IllegalStateException - if the job is submitted

setMapOutputKeyClass

```
public void setMapOutputKeyClass(Class<?> theClass)
    throws IllegalStateException
```

Set the key class for the map output data. This allows the user to specify the map output key class to be different than the final output value class.

Parameters:

theClass - the map output key class.

Throws:

IllegalStateException - if the job is submitted

setMapOutputValueClass

```
public void setMapOutputValueClass(Class<?> theClass)
    throws IllegalStateException
```

Set the value class for the map output data. This allows the user to specify the map output value class to be different than the final output value class.

Parameters:

theClass - the map output value class.

Throws:

IllegalStateException - if the job is submitted

setOutputKeyClass

```
public void setOutputKeyClass(Class<?> theClass)
                           throws IllegalStateException
```

Set the key class for the job output data.

Parameters:

theClass - the key class for the job output data.

Throws:

IllegalStateException - if the job is submitted

setOutputValueClass

```
public void setOutputValueClass(Class<?> theClass)
                               throws IllegalStateException
```

Set the value class for job outputs.

Parameters:

theClass - the value class for job outputs.

Throws:

IllegalStateException - if the job is submitted

setCombinerKeyGroupingComparatorClass

```
public void setCombinerKeyGroupingComparatorClass(Class<? extends RawComparator> cls)
                                                 throws IllegalStateException
```

Define the comparator that controls which keys are grouped together for a single call to combiner, Reducer.reduce(Object, Iterable, org.apache.hadoop.mapreduce.Reducer.Context)

Parameters:

cls - the raw comparator to use

Throws:

IllegalStateException - if the job is submitted

setSortComparatorClass

```
public void setSortComparatorClass(Class<? extends RawComparator> cls)
                                    throws IllegalStateException
```

Define the comparator that controls how the keys are sorted before they are passed to the Reducer.

Parameters:

cls - the raw comparator

Throws:

IllegalStateException - if the job is submitted

See Also:

setCombinerKeyGroupingComparatorClass(Class)

setGroupingComparatorClass

```
public void setGroupingComparatorClass(Class<? extends RawComparator> cls)
                                         throws IllegalStateException
```

Define the comparator that controls which keys are grouped together for a single call to `Reducer.reduce(Object, Iterable, org.apache.hadoop.mapreduce.Reducer.Context)`

Parameters:

`cls` - the raw comparator to use

Throws:

`IllegalStateException` - if the job is submitted

See Also:

`setCombinerKeyGroupingComparatorClass(Class)`

setJobName

```
public void setJobName(String name)
    throws IllegalStateException
```

Set the user-specified job name.

Parameters:

`name` - the job's new name.

Throws:

`IllegalStateException` - if the job is submitted

setSpeculativeExecution

```
public void setSpeculativeExecution(boolean speculativeExecution)
```

Turn speculative execution on or off for this job.

Parameters:

`speculativeExecution` - true if speculative execution should be turned on, else false.

setMapSpeculativeExecution

```
public void setMapSpeculativeExecution(boolean speculativeExecution)
```

Turn speculative execution on or off for this job for map tasks.

Parameters:

`speculativeExecution` - true if speculative execution should be turned on for map tasks, else false.

setReduceSpeculativeExecution

```
public void setReduceSpeculativeExecution(boolean speculativeExecution)
```

Turn speculative execution on or off for this job for reduce tasks.

Parameters:

`speculativeExecution` - true if speculative execution should be turned on for reduce tasks, else false.

setJobSetupCleanupNeeded

```
public void setJobSetupCleanupNeeded(boolean needed)
```

Specify whether job-setup and job-cleanup is needed for the job

Parameters:

`needed` - If true, job-setup and job-cleanup will be considered from `OutputCommitter` else ignored.

setCacheArchives

```
public void setCacheArchives(URI[] archives)
```

Set the given set of archives

Parameters:

archives - The list of archives that need to be localized

setCacheFiles

```
public void setCacheFiles(URI[] files)
```

Set the given set of files

Parameters:

files - The list of files that need to be localized

addCacheArchive

```
public void addCacheArchive(URI uri)
```

Add a archives to be localized

Parameters:

uri - The uri of the cache to be localized

addCacheFile

```
public void addCacheFile(URI uri)
```

Add a file to be localized

Parameters:

uri - The uri of the cache to be localized

addFileToClassPath

```
public void addFileToClassPath(Path file)
                               throws IOException
```

Add an file path to the current set of classpath entries It adds the file to cache as well. Files added with this method will not be unpacked while being added to the classpath. To add archives to classpath, use the `addArchiveToClassPath(Path)` method instead.

Parameters:

file - Path of the file to be added

Throws:

IOException

addArchiveToClassPath

```
public void addArchiveToClassPath(Path archive)
                                   throws IOException
```

Add an archive path to the current set of classpath entries. It adds the archive to cache as well. Archive files will be unpacked and added to the classpath when being distributed.

Parameters:

archive - Path of the archive to be added

Throws:

IOException

createSymlink

```
@Deprecated
public void createSymlink()
```

Deprecated.

Originally intended to enable symlinks, but currently symlinks cannot be disabled.

setMaxMapAttempts

```
public void setMaxMapAttempts(int n)
```

Expert: Set the number of maximum attempts that will be made to run a map task.

Parameters:

n - the number of attempts per map task.

setMaxReduceAttempts

```
public void setMaxReduceAttempts(int n)
```

Expert: Set the number of maximum attempts that will be made to run a reduce task.

Parameters:

n - the number of attempts per reduce task.

setProfileEnabled

```
public void setProfileEnabled(boolean newValue)
```

Set whether the system should collect profiler information for some of the tasks in this job? The information is stored in the user log directory.

Parameters:

newValue - true means it should be gathered

setProfileParams

```
public void setProfileParams(String value)
```

Set the profiler configuration arguments. If the string contains a '%' it will be replaced with the name of the profiling output file when the task runs. This value is passed to the task child JVM on the command line.

Parameters:

value - the configuration string

setProfileTaskRange

```
public void setProfileTaskRange(boolean isMap,
                               String newValue)
```

Set the ranges of maps or reduces to profile. setProfileEnabled(true) must also be called.

Parameters:

newValue - a set of integer ranges of the map ids

setCancelDelegationTokenUponJobCompletion

```
public void setCancelDelegationTokenUponJobCompletion(boolean value)
```

Sets the flag that will allow the JobTracker to cancel the HDFS delegation tokens upon job completion. Defaults to true.

submit

```
public void submit()
    throws IOException,
           InterruptedException,
           ClassNotFoundException
```

Submit the job to the cluster and return immediately.

Throws:

[IOException](#)

[InterruptedException](#)

```
ClassNotFoundException
```

waitForCompletion

```
public boolean waitForCompletion(boolean verbose)
    throws IOException,
           InterruptedException,
           ClassNotFoundException
```

Submit the job to the cluster and wait for it to finish.

Parameters:

verbose - print the progress to the user

Returns:

true if the job succeeded

Throws:

IOException - thrown if the communication with the JobTracker is lost

InterruptedException

ClassNotFoundException

monitorAndPrintJob

```
public boolean monitorAndPrintJob()
    throws IOException,
           InterruptedException
```

Monitor a job and print status in real-time as progress is made and tasks fail.

Returns:

true if the job succeeded

Throws:

IOException - if communication to the JobTracker fails

InterruptedException

getProgressPollInterval

```
public static int getProgressPollInterval(Configuration conf)
```

The interval at which monitorAndPrintJob() prints status

getCompletionPollInterval

```
public static int getCompletionPollInterval(Configuration conf)
```

The interval at which waitForCompletion() should check.

getTaskOutputFilter

```
public static org.apache.hadoop.mapreduce.Job.TaskStatusFilter getTaskOutputFilter(Configuration conf)
```

Get the task output filter.

Parameters:

conf - the configuration.

Returns:

the filter level.

setTaskOutputFilter

```
public static void setTaskOutputFilter(Configuration conf,
                                       org.apache.hadoop.mapreduce.Job.TaskStatusFilter newValue)
```

Modify the Configuration to set the task output filter.

Parameters:

conf - the Configuration to modify.

newValue - the value to set.

isUber

```
public boolean isUber()
    throws IOException,
        InterruptedException
```

Throws:

IOException

InterruptedException

getReservationId

```
public ReservationId getReservationId()
```

Get the reservation to which the job is submitted to, if any

Returns:

the reservationId the identifier of the job's reservation, null if the job does not have any reservation associated with it

setReservationId

```
public void setReservationId(ReservationId reservationId)
```

Set the reservation to which the job is submitted to

Parameters:

reservationId - the reservationId to set

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