

# History Management

## Outline

The information generated while batch processing is underway is repositied in ExecutionContext that supports reposition of JobInstance, JobParams, JobExecution, StepExecution and key-value of JobRepository, followed by history management.

## Description

Refer to the following for how JobInstance, JobParams, JobExecution, StepExecution and ExecutionContext are defined:

### BATCH\_JOB\_INSTANCE

JobInstance Attribute	Description
<b>jobInstanceId</b>	JobInstance ID
<b>version</b>	Fix count for JobInstance
<b>jobName</b>	Title of Job
<b>jobKey</b>	Serialization of JobParameters that categorize JobInstance

### BATCH\_JOB\_EXECUTION

JobExecution Attribute	Description
<b>status</b>	Representing the status of execution, BatchStatus is represented as BatchStatus,STARTED while execution is underway, BatchStatus.FAILED when execution is failed and BatchStatus.COMPLETED when execution is complete.
<b>startTime</b>	Start time for execution, repositied in the form of java.Util.Data
<b>endTime</b>	End time for execution, repositied in the form of java.Util.Data, regardless of success or failure
<b>exitStatus</b>	Result of execution. Inclusive of the exit code to be returned to the caller
<b>createTime</b>	Create time for JobExecution, repositied in the form of java.Util.Data
<b>lastUpdated</b>	Last update time for JobExecution, repositied in the form of java.Util.Data
<b>executionContext</b>	‘Property Bag’ that contains data required to be subsisting while execution is underway
<b>failureExceptions</b>	In-job exceptions breakdown

### BATCH\_JOB\_PARAMS

JobParams	Description
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<b>jobInstanceId</b>	jobInstanceId of the table BATCH_JOB_INSTANCE
<b>typeCd</b>	Type of parameter defined in a string. Null is not permitted
<b>keyName</b>	Key of parameter
<b>stringVal</b>	Parameter value represented in the form of string
<b>dateVal</b>	Parameter value represented in the form of date
<b>longVal</b>	Parameter value represented in the form of long
<b>doubleVal</b>	Parameter value represented in the form of double

## BATCH\_STEP\_EXECUTION

StepExecution Attribute	Description
<b>status</b>	Representing the status of execution, BatchStatus is represented as BatchStatus.STARTED while execution is underway, BatchStatus.FAILED when execution is failed and BatchStatus.COMPLETED when execution is complete.
<b>startTime</b>	Start time for execution, reposited in the form of java.Util.Data
<b>endTime</b>	End time for execution, reposited in the form of java.Util.Data, regardless of success or failure
<b>exitStatus</b>	Result of execution. Inclusive of the exit code to be returned to the caller
<b>executionContext</b>	‘Property Bag’ that contains data required to be subsisting while execution is underway
<b>readCount</b>	Number of items read
<b>writeCount</b>	Number of items written
<b>commitCount</b>	Transaction commit count for an execution
<b>rollbackCount</b>	Count of business transactions controlled by any roll-back step
<b>readSkipCount</b>	Number of items skipped upon read failure
<b>processSkipCount</b>	Number of items skipped upon process failure
<b>filterCount</b>	Number of items filtered by ItemProcessor
<b>writeSkipCount</b>	Number of items skipped upon write failure

## BATCH\_JOB\_EXECUTION\_CONTEXT

JobExecutionContext Attribute	Description
<b>jobExecutionId</b>	jobInstanceId of the table BATCH_JOB_EXECUTION

<b>shortContext</b>	SERIALIZED_CONTEXT represented in the form of string
<b>serializedContext</b>	Entire context

## BATCH\_STEP\_EXECUTION\_CONTEXT

StepExecutionContext Attribute	Description
<b>stepExecutionId</b>	jobInstanceId of the table BATCH_STEP_EXECUTION
<b>shortContext</b>	SERIALIZED_CONTEXT represented in the form of string
<b>serializedContext</b>	Entire context

## References

- Meta-Data Schema :<http://static.springsource.org/spring-batch/reference/html/metaDataSchema.html>