Workflow Job Queue

# Introduction

In Workflow Systems (Workflow Management Coalition, 1995) a workflow contains a number of jobs to be carried out. To facilitate distribution and resource management Job Queues are used. Job Queues contains jobs from many workflows and are a means to use computer resources efficiently by being job unaware. The job knows what to do. Workflow jobs are sent to a queue to be executed. The queue then takes a job out of the queue when resources are available and executes the job.

Requirements   
Only a certain amount of threads can be started by the queue to not overload the system.  
Only a certain amount of jobs waiting is allowed. If the number of jobs waiting is at the maximum amount the queue does not accept further jobs to be added to the queue.  
When the queue is shutdown all jobs within the queue have to be finished before the shutdown.

# References

Workflow Management Coalition (1995). *The Workflow Reference Model*. from <http://www.wfmc.org/standards/docs/tc003v11.pdf>