

1.1 BES Information Model

Table 1 lists the resource properties associated with a job factory. These were derived from the implied resource model inherent in JSDL 1.0, the Unicore resource model and the GRAM resource description. See section **Error! Reference source not found.** for a summary of these.

JDSL = green

Other = blue

Implementation dependent = red

Not advertised = black

Changes to cardinality = pink

Table 1: Job Factory Interface Resource Properties

Name	N	Type	Description
Name	1	String	A human-readable name for the Job Factory.
LocalResourceManagerType	0..1	String	The local resource manager type (e.g. Condor, LSF, PBS, etc.)
TotalNumberofJobs	0	Integer	The number of Managed Jobs associated with this factory. Jobs that have been destroyed as not included, so this is a "live Job" count.
JobReference	≥ 0	EPR	An EPR to each Managed Job associated with this Job Factory.
Description	0 or 1	String	General text describing the resource/site/system/...
Execution Service Location	0..1	URL	The location of the execution service.
Job Credential Service	0..1	EPR	The credential service providing authorization credentials for the Managed Job. ¹
File Credential Service	0..1	EPR	The credential service providing authorizations credentials for the file transfers needed by the Managed Job.
Resource Description	These are resource description elements taken from JSDL.		

¹ These credential services should be optional in the sense that the client MAY ignore them. In particular it should be possible to submit to a Globus based implementation of ESI without GSI, e.g. using the OGSA Basic Security Profiles.

OperatingSystem	1	jsdl:OperatingSystem	The Operating System running on the local resource.
OperatingSystemVersion	0..1	bes:Version	Version of the OS
MaxProcessesPerUser	0..1	bes:MaxProcessesPerUser	Max processes that job can spawn
CPUArchitecture	1	jsdl:CPUAchitecture	The CPU architecture on the local resource
CPUCount	1	jsdl:TotalCPUCount	The total number of CPUs available at the local resource
CPU Speed	1	jsdl:IndividualCPUSpeed	The speed of each CPU in the local resource
PhysicalMemory	1	jsdl:TotalPhysicalMemory	The total physical memory to jobs on the local resource
VirtualMemory	1	jsdl:TotalVirtualMemory	The total virtual memory available to jobs on the local resource
WriteableFileSpace	0..1	bes:WriteableFileSpace	Available file space in the job's working environment (within the execution container)
NetworkBandwidth	1	jsdl:IndividualNetworkBandwidth	The maximum network bandwidth available to jobs on the local resource
Library	≥ 0	esi:Library	An ESI extension to JSDL describing libraries made available to jobs on the local resource.
Job Request Constraints	The following resource properties, if published, impose constraints to the maximum value the local resource allows jobs to consume. If one of the following RPs is not published in the Job Factory Interface, then the local resource grants unlimited usage of this resource property to any submitted job. For individual descriptions JSDL 1.0 specification.		
WallTime	0..1	jsdl-posix:WallTimeLimit	See JSDL 1.0
FileSize	0..1	jsdl-posix:FileSizeLimit	See JSDL 1.0
CoreDump	0..1	jsdl-posix:CoreDumpLimit	See JSDL 1.0
DataSegment	0..1	jsdl-posix:DataSegmentLimit	See JSDL 1.0
LockedMemory	0..1	jsdl-posix:LockedMemoryLimit	See JSDL 1.0
Memory	0..1	jsdl-posix:MemoryLimit	See JSDL 1.0
OpenDescriptors	0..1	jsdl-posix:OpenDescriptorsLimit	See JSDL 1.0
PipeSize	0..1	jsdl-posix:PipeSizeLimit	See JSDL 1.0
StackSize	0..1	jsdl-posix:StackSizeLimit	See JSDL 1.0
CPUTime	0..1	jsdl-posix:CPUTimeLimit	See JSDL 1.0
ProcessCount	0..1	jsdl-posix:ProcessCountLimit	See JSDL 1.0

VirtualMemory	0..1	jsdl-posix:VirtualMemoryLimit	See JSDL 1.0
ThreadCount	0..1	jsdl-posix:ThreadCountLimit	See JSDL 1.0
Extensibility	≥ 0	Any	Extensibility elements: can be used to accommodate GLUE and other resource descriptions
ResourcePropertyNames	1		Inherited from WSRF OGSA Base Profile
FinalWSResourceInterface	1		
WSResourceInterfaces	1		
ResourceEndpointReference	1		
CurrentTime	1		Inherited from the WS-ResourceLifetime specification
TerminationTime	1		