



*Nordic Testbed for Wide Area Com-  
puting And Data Handling*

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## JSDL TO xRSL CORRESPONDENCE AS IMPLEMENTED IN ARCLIB

*Description.\**

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# 1 Mapping

RSL element	JSDL element	Namespace
jobname	JobDescription:JobIdentification:JobName	JSDL
acl	JobDescription:AccessControl:Content & JobDescription:AccessControl:Type=GACL	ARC
queue	JobDescription:Queue	ARC
reruns	JobDescription:Reruns	ARC
gmlog	JobDescription:LocalLogging:Directory	ARC
credentialserver	JobDescription:CredentialServer:URL	ARC
lifetime	JobDescription:Resource:SessionLifeTime	ARC
runtimeenvironments	JobDescription:Resource:RunTimeEnvironment:Name= JobDescription:Resource:RunTimeEnvironment:Version:Exact	ARC
count	JobDescription:Resource:TotalCPUCount:UpperBoundedRange	JSDL
	JobDescription:Resource:TotalCPUCount:LowerBoundedRange	JSDL
	JobDescription:Resource:IndividualCPUCount:UpperBoundedRange	JSDL
	JobDescription:Resource:IndividualCPUCount:LowerBoundedRange	JSDL
memory	JobDescription:Application:POSIXApplication:MemoryLimit	JSDLPosix
	JobDescription:Resource:TotalPhysicalCount:UpperBoundedRange	JSDL
	JobDescription:Resource:TotalPhysicalCount:LowerBoundedRange	JSDL
	JobDescription:Resource:IndividualPhysicalCount:UpperBoundedRange	JSDL
	JobDescription:Resource:IndividualPhysicalCount:LowerBoundedRange	JSDL
cputime	JobDescription:Application:POSIXApplication:CPULimit	JSDLPosix
	JobDescription:Resource:TotalCPUTime:UpperBoundedRange	JSDL
	JobDescription:Resource:TotalCPUTime:LowerBoundedRange	JSDL
	JobDescription:Resource:IndividualCPUTime:UpperBoundedRange	JSDL
	JobDescription:Resource:IndividualCPUTime:LowerBoundedRange	JSDL
wall_time	JobDescription:Application:POSIXApplication:WallTimeLimit	JSDLPosix
middleware	JobDescription:Resource:Middleware	ARC
stdin	JobDescription:Application:POSIXApplication:Input	JSDLPosix
stdout	JobDescription:Application:POSIXApplication:Output	JSDLPosix
stderr	JobDescription:Application:POSIXApplication:Error	JSDLPosix
executable	JobDescription:Application:POSIXApplication:Executable	JSDLPosix
arguments	JobDescription:Application:POSIXApplication:Argument	JSDLPosix
jobreport	JobDescription:RemoteLogging:URL	ARC
inputfiles	JobDescription:DataStaging:FileName+JobDescription:DataStaging:Source	JSDL
	JobDescription:DataStaging:FileName+JobDescription:DataStaging:Source:URI	JSDL
outputfiles	JobDescription:DataStaging:FileName	JSDL
	JobDescription:DataStaging:FileName+JobDescription:DataStaging:Target	JSDL
	JobDescription:DataStaging:FileName+JobDescription:DataStaging:Target:URI	JSDL
executables	JobDescription:DataStaging:FileName & JobDescription:DataStaging:Source+JobDescription:DataStaging:IsExecutable=true	JSDL
	()	JobDescription:JobDescription

Here if there are more than one JSDL elements list for per one xRSL element, first available value is taken.

## 2 Schema

```
<?xml version="1.0" encoding="UTF-8"?>
<xsd:schema xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns="http://www.nordugrid.org/ws/schemas/jsdl-arc"
xmlns:jsdl-arc="http://www.nordugrid.org/ws/schemas/jsdl-arc"
targetNamespace="http://www.nordugrid.org/ws/schemas/jsdl-arc">
<xsd:simpleType name="GMState_Type">
<xsd:restriction base="xsd:string">
<xsd:enumeration value="ACCEPTED"/>
<xsd:enumeration value="PREPARING"/>
<xsd:enumeration value="SUBMIT"/>
<xsd:enumeration value="INLRMS"/>
<xsd:enumeration value="FINISHING"/>
<xsd:enumeration value="FINISHED"/>
<xsd:enumeration value="DELETED"/>
<xsd:enumeration value="CANCELING"/>
</xsd:restriction>
</xsd:simpleType>
<xsd:complexType name="Version_Type">
<xsd:sequence>
<xsd:element name="UpperExclusive" type="xsd:string" minOccurs="0"/>
<xsd:element name="LowerExclusive" type="xsd:string" minOccurs="0"/>
<xsd:element name="Exact" type="xsd:string" minOccurs="0" maxOccurs="unbounded"/>
<xsd:element name="Exclusive" type="xsd:boolean" minOccurs="0"/>
</xsd:sequence>
</xsd:complexType>
<xsd:simpleType name="SessionType_Type">
<xsd:documentation> For jsdl:Resources_Type </xsd:documentation>
<!-- xsd:element ref="SessionType" minOccurs="0" -->
<xsd:restriction base="xsd:string">
<xsd:enumeration value="INTERNAL"/>
<xsd:enumeration value="LIMITED"/>
<xsd:enumeration value="READONLY"/>
<xsd:enumeration value="FULL"/>
</xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="IsExecutable_Type">
<xsd:documentation> For jsdl:DataStaging_Type (default: false) </xsd:documentation>
<!-- xsd:element ref="IsExecutable" minOccurs="0" -->
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<xsd:restriction base="xsd:boolean"/>
</xsd:simpleType>
<xsd:simpleType name="JoinOutputs_Type">
<xsd:documentation> For jsdl:JobDescription_Type (default: false) </xsd:documentation>
<!-- xsd:element ref="JoinOutputs" minOccurs="0"/ -->
<xsd:restriction base="xsd:boolean"/>
</xsd:simpleType>
<xsd:simpleType name="Queue_Type">
<xsd:documentation> For jsdl:JobDescription_Type (default: false) </xsd:documentation>
<!-- xsd:element ref="Queue" minOccurs="0"// -->
<xsd:restriction base="xsd:string"/>
</xsd:simpleType>
<xsd:simpleType name="Reruns_Type">
<xsd:documentation> For jsdl:JobDescription_Type (default: false) </xsd:documentation>
<!-- xsd:element ref="Reruns" minOccurs="0"// -->
<xsd:restriction base="xsd:integer"/>
</xsd:simpleType>
<xsd:complexType name="RunTimeEnvironment_Type">
<xsd:documentation> For jsdl:Resources_Type </xsd:documentation>
<!-- xsd:element ref="RunTimeEnvironment" minOccurs="0" maxOccurs="unbounded"/ -->
<xsd:sequence>
<xsd:element name="Name" type="xsd:string"/>
<xsd:element name="Version" type="Version_Type" minOccurs="0"/>
</xsd:sequence>
</xsd:complexType>
<xsd:complexType name="Middleware_Type">
<xsd:documentation> For jsdl:Resources_Type </xsd:documentation>
<!-- xsd:element ref="Middleware" minOccurs="0" maxOccurs="unbounded"/ -->
<xsd:sequence>
<xsd:element name="Name" type="xsd:string"/>
<xsd:element name="Version" type="Version_Type" minOccurs="0"/>
</xsd:sequence>
</xsd:complexType>
<xsd:complexType name="RemoteLogging_Type">
<xsd:documentation> For jsdl:JobDescription_Type </xsd:documentation>
<!-- xsd:element ref="RemoteLogging" minOccurs="0" maxOccurs="3"/ -->
<xsd:sequence>
<xsd:element name="URL" minOccurs="1" maxOccurs="1" type="xsd:anyURI"/>
</xsd:sequence>
</xsd:complexType>
<xsd:complexType name="CredentialServer_Type">
<xsd:documentation> For jsdl:JobDescription_Type </xsd:documentation>
<!-- xsd:element ref="CredentialServer" minOccurs="0"/ -->

```

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<xsd:sequence>
<xsd:element name="URL" minOccurs="1" maxOccurs="1" type="xsd:anyURI"/>
</xsd:sequence>
</xsd:complexType>
<xsd:complexType name="LocalLogging_Type">
<xsd:documentation> For jsdl:JobDescription_Type </xsd:documentation>
<!-- xsd:element ref="LocalLogging" minOccurs="0" maxOccurs="1"/ -->
<xsd:sequence>
<xsd:element name="Directory" minOccurs="1" maxOccurs="1" type="xsd:string"/>
</xsd:sequence>
</xsd:complexType>
<xsd:simpleType name="AccessControlType_Type">
<xsd:restriction base="xsd:string">
<xsd:enumeration value="GACL"/>
</xsd:restriction>
</xsd:simpleType>
<xsd:complexType name="AccessControl_Type">
<xsd:documentation> For jsdl:JobDescription_Type </xsd:documentation>
<!-- xsd:element ref="AccessControl" minOccurs="0"/ -->
<xsd:sequence>
<xsd:element name="OwnerAlwaysAllowed" type="xsd:boolean" minOccurs="0"/>
<xsd:element name="Type" type="AccessControlType_Type" minOccurs="0"/>
<xsd:element name="Content" minOccurs="0" type="xsd:string"/>
</xsd:sequence>
</xsd:complexType>
<xsd:simpleType name="NotificationType_Type">
<xsd:restriction base="xsd:string">
<xsd:enumeration value="Email"/>
</xsd:restriction>
</xsd:simpleType>
<xsd:complexType name="Notify_Type">
<xsd:documentation> For jsdl:JobDescription_Type </xsd:documentation>
<!-- xsd:element ref="Notify" minOccurs="0" maxOccurs="3"/ -->
<xsd:sequence>
<xsd:element name="Type" type="NotificationType_Type" minOccurs="0"/>
<xsd:element name="Endpoint" minOccurs="0" type="xsd:string"/>
<xsd:element name="State" minOccurs="1" maxOccurs="unbounded" type="GMState_Type"/>
</xsd:sequence>
</xsd:complexType>
<xsd:simpleType name="SessionLifeTime_Type">
<xsd:documentation> For jsdl:Resources_Type </xsd:documentation>
<!-- xsd:element ref="SessionLifeTime" minOccurs="0" maxOccurs="1"/ -->
<xsd:restriction base="xsd:long"/>

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```
</xsd:simpleType>
<!------->
<xsd:element name="IsExecutable" type="IsExecutable_Type"/>
<xsd:element name="RunTimeEnvironment" type="RunTimeEnvironment_Type"/>
<xsd:element name="Middleware" type="Middleware_Type"/>
<xsd:element name="RemoteLogging" type="RemoteLogging_Type"/>
<xsd:element name="LocalLogging" type="LocalLogging_Type"/>
<xsd:element name="AccessControl" type="AccessControl_Type"/>
<xsd:element name="Notify" type="Notify_Type"/>
<xsd:element name="SessionLifeTime" type="SessionLifeTime_Type"/>
<xsd:element name="SessionType" type="SessionType_Type"/>
<xsd:element name="JoinOutputs" type="JoinOutputs_Type"/>
<xsd:element name="Queue" type="Queue_Type"/>
<xsd:element name="Reruns" type="Reruns_Type"/>
<xsd:element name="CredentialServer" type="CredentialServer_Type"/>
</xsd:schema>
```