Schema

title:	JADN Syntax
module:	oasis-open.org/openc2/v1.0/jadn
patch:	wd01
description:	Syntax of a JSON Abstract Data Notation (JADN) module.
exports:	Schema, Uname

Structure Types

Schema

Definition of a JADN file

Schema (Record)

ID	Name	Type	#	Description
1	meta	Meta	1	Information about this schema module
2	types	Type	1..n	Types defined in this schema module

Meta

Meta-information about this schema

Meta (Map)

ID	Name	Type	#	Description
1	module	Uname	1	Schema unique name/version
2	patch	String	0..1	Patch version
3	title	String	0..1	Title
4	description	String	0..1	Description
5	imports	Import	0..n	Imported schema modules
6	exports	Identifier	0..n	Data types exported by this module
7	bounds	Bounds	0..1	Schema-wide upper bounds

Import

Imported module id and unique name

Import (Array)

ID	Type	#	Description
1	Nsid	1	"nsid": A short local identifier (namespace id) used within this module to refer to the imported module
2	Uname	1	"uname": Unique name of imported module

Bounds

Schema-wide default upper bounds. Overrides codec defaults, overridden by type definitions

Bounds (Array)

ID	Type	#	Description
1	Integer	1	"max_msg": Maximum serialized message size in octets or characters
2	Integer	1	"max_str": Maximum string length in characters
3	Integer	1	"max_bin": Maximum binary length in octets
4	Integer	1	"max_fields": Maximum number of elements in ArrayOf

Type

Type (Array)

ID	Type	#	Description
1	Identifier	1	"tname": Name of this datatype
2	JADN-Type	1	"btype": Base type. Enumerated value derived from list of JADN data types
3	Option	1..n	"opts": Type options
4	String	1	"desc": Description of this data type
5	JADN-Type	1..n	"fields": List of fields for compound types. Not present for primitive types

JADN-Type

JADN-Type (Choice {'compact': True})

ID	Name	Type	Description
1	Binary	Null	Octet (binary) string
2	Boolean	Null	True or False
3	Integer	Null	Whole number
4	Number	Null	Real number
5	Null	Null	Nothing
6	String	Null	Character (text) string
7	Array	FullField	Ordered list of unnamed fields
8	ArrayOf	Null	Ordered list of fields of a specified type
9	Choice	FullField	One of a set of named fields
10	Enumerated	EnumField	One of a set of id:name pairs
11	Map	FullField	Unordered set of named fields
12	Record	FullField	Ordered list of named fields

EnumField

Item definition for Enumerated types

EnumField (Array)

ID	Type	#	Description
1	Integer	1	Item ID
2	String	1	Item name
3	String	1	Item description

FullField

Field definition for other compound types

FullField (Array)

ID	Type	#	Description
1	Integer	1	Field ID or ordinal position
2	Identifier	1	Field name
3	Identifier	1	Field type
4	Option	0..n	Field options
5	String	1	Field description

Primitive Types

Name	Type	Description
Identifier	String	A string starting with an alpha char followed by zero or more alphanumeric / underscore / dash chars
Nsid	String	Namespace ID – a short identifier
Uname	String	Unique name (e.g., of a schema) – typically a set of Identifiers separated by forward slashes
Option	String	Option string: 1st char = option id