JSON & XML

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Converting To/From XML & JSON

```xml
<authors>
    <author>
        <name>Xavier Morera</name>
        <course>Solr</course>
        <course>dotTrace</course>
        <course>JIRA</course>
        <totalcourses>3</totalcourses>
        <currentlyauthoring>true</currentlyauthoring>
    </author>
</authors>
```

Converting To/From XML & JSON

```json
{
    "authors": {
        "author": [
            {
                "name": "Xavier Morera",
                "course": ["Solr", "dotTrace", "JIRA"],
                "totalcourses": "3",
                "currentlyauthoring": "true"
            }
        ]
    }
}
```

Rules for Converting

Elements remain unchanged

Attributes are prefixed with an @
- Should be at the start of the object

Single child text nodes
- Value
- Or accessed via #text

XML declaration / processing instructions
- Prefixed with a question mark (?)

Rules for Converting

Character data, comments, whitespace and significant whitespace nodes

- #cdata-section, #comment, #whitespace and #significant-whitespace

Multiple nodes at same level and name

- Grouped into an array

Single elements can be forced into an array

Empty elements are null

Manual conversion still possible

Converting To/From XML & JSON

XmlNodeConverter

XMLDocument

SerializeXmlNode
DeserializeXmlNode

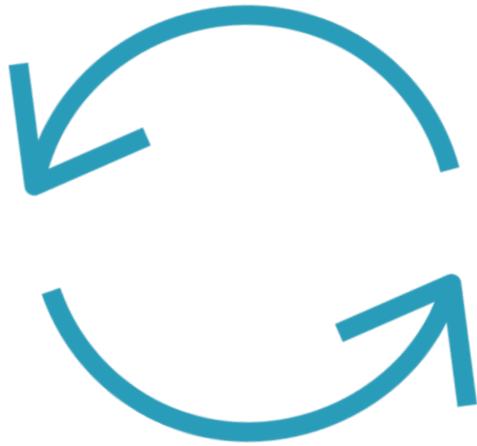**XNodeConverter**

XDocument

SerializeXNode
DeserializeXNode

Issues Converting Between JSON & XML

No real equivalent of XML attributes in JSON

Different representations

Xml allows mixed content

Data types differences

Incorrect mapping of JSON arrays

Demo

Converting between XML and JSON

Demo

XML Force JSON Array

Incompatible XML & JSON

XML	JSON
Single root element	Array or object
Different representations of data	Properties, objects or arrays
Namespaces	No namespaces
Single element: array or not?	Arrays are clear
Key name can start with a number	Key name CAN'T start with number

Incompatible XML & JSON

XML	JSON
Comments available	No comments
Order may be important	Order not relevant (except type)
Meaning may change (namespace)	Straightforward

Possible but difficult to handle ANY conversion

Converting to and from XML and JSON

Takeaway

Data interchange formats

Conversion Possible
- Tricky

Json.NET standard functionality
- SerializeXNode/DeserializeXNode
- SerializeXMLNode/DeserializeXMLNode
- Or custom JSONConverter