

Core Requirements

OSCAL requirements common to all content.

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Character Encoding

UTF-8 Character Encoding

OSCAL uses UTF-8 character encoding. JSON and YAML files are always UTF-8 character encoded, but XML files must include an explicit UTF-8 encoding. Other encodings are not allowed and could create unpredictable results in OSCAL tools.

To ensure In OSCAL XML content is processed as UTF-8 encoding, explicitly specify it on the first line of any OSCAL XML file as follows:

```
<?xml version='1.0' encoding='UTF-8'?>
```

Required Root Information

Core OSCAL requires some content to be present all OSCAL artifacts. This is critical to consistent processing.

Root Element and Root-Level Universally Unique Identifier

The root element must be one of the case-sensitive OSCAL model names:

- catalog
- profile
- mapping-collection (OSCAL version $\geq 1.2.0$)
- component-definition
- system-security-plan
- plan-of-action-and-milestones
- assessment-plan
- assessment-results

It must be immediately followed by root-level (document-level) UUID.

In JSON and YAML, the UUID is a child of the root element. In XML it is an attribute of the root element.

Additional XML Requirement

OSCAL XML artifacts must include an XML declaration above the root element, and XML namespace declaration as an attribute of the root element.

XML Example

```
<?xml version="1.0" encoding="UTF-8"?>
<system-security-plan
  xmlns="http://csrc.nist.gov/ns/oscal/1.0"
  uuid="11111111-2222-4000-8000-000000000000">
</catalog>
```

JSON Example

```
{
  "system-security-plan": {
    "uuid": "11111111-2222-4000-8000-000000000000"
  }
}
```

```
}
```

YAML Example

```
system-security-plan:  
  uuid: 11111111-2222-4000-8000-000000000000
```

Required Metadata

All OSCAL artifacts must have the following content in `metadata`:

- `title`: The artifact's title
- `last-modified`: The date/timestamp of the last modification to any content in the artifact. This is an [date-time-with-timezone](#) format.
- `version`: The version of the content itself. May be any string, including "draft".
- `oscal-version`: The OSCAL version of the syntax. This must be a published OSCAL version, such as "1.1.3" or "1.2.1".

Example

```
system-security-plan:  
  uuid: 11111111-2222-4000-8000-000000000000  
  metadata:  
    title: \"[EXAMPLE] FedRAMP \"[Baseline Name] System Security Plan (SSP)  
    last-modified: '2025-01-08T04:18:29Z'  
    version: fedramp-3.0.0rc1-oscal-1.1.2  
    oscal-version: 1.1.3
```