SkillsCommons Content Exported From Jenzabar® in IMS Common Cartridge Format

Skills Commons (www.skillscommons.org) contains a variety of materials, including exports of courses developed in the Jenzabar (www.jenzabar.com) Learning Management System (LMS). If these exports are in the IMS Common Cartridge format, an importing LMS may report some issues.

Skills Commons is providing the following guidance to submitters so they can improve the quality these Common Cartridge packages.

One option is to import the cartridge and see if your LMS reports any errors. If there are no errors, you may want to assume the cartridge is fine. In any case, you will want to carefully review the result of an import from any source. Note that importing a cartridge, even if it is imperfect won' damage your LMS. If there are errors or if you want to check the cartridge before you import it, there is a validator that is freely available to anyone.

The IMS Global Learning (www.imsglobal.org) is the standards body that developed and supports the Common Cartridge format. Since the purpose of the Common Cartridge is to allow content that is developed in one LMS to be imported into another, the community benefits from a way to validate cartridges. IMS provides a tool to do this (validator.imsglobal.org). The validator:

- Is a tool for cartridge developers, typically publishers or LMS vendors, to confirm their files are correct.
- Is a tool for customers to have confidence that they are about to import something that is properly formatted.
- The validator provides a way to assign responsibility, initially, for resolving issues. If the cartridge is valid, the onus is on the importing product to do the right things; if the cartridge is invalid, the onus is on the creating product to fix the issues.

To run the validator, visit the website http://validator.imsglobal.org/cc, and choose a file you downloaded from Skills Commons. Note the file likely has the extension ".imscc" is a v1.1 format. It is possible that the file if for another version, but start with the default if the extension is ".imscc".

IMS GLOBAL®
Learning Consortium

Advancing Learning Impact by Enabling the Open Foundation for
Seamless, Agile and Information-Rich Educational Technology Integration

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Validate URI :: Direct Input :: Upload Manifest :: Upload Cartridge

Cartridge: [Choose File] no file selected   Browse to begin validation.

Select a Profile: ○ CC v1.0 ⊙ CC v1.1 (default) ○ CC v1.2 ○ CC v1.3 ○ Thin CCv1.3

IMS Common Cartridge™ Test System
COMMON CARTRIDGE v1.0, v1.1, v1.2, v1.3
This test system is made available free-of-charge so that you can perform your own testing of
cartridges for conformance with the IMS Common Cartridge v1.0, v1.1, v1.2 and v1.3 specifications
by choosing the appropriate test from the buttons above to test against the correct profile. Join the
Common Cartridge Alliance to receive support using the Common Cartridge Validator Forum.
Membership in the Common Cartridge Alliance is the only way to achieve official conformance to the
Common Cartridge (CC) standard. For directions on how to apply for conformance, visit:
http://www.imsglobal.org/developers/alliance/testdata.cfm

How to use the validator
VIA WEB UI, SOAP WEB SERVICE OR COMMAND LINE
Currently the validator can validate an imsmanifest.xml file or an entire cartridge. The validation
options are: Validate by URI (provide a URI to an ims manifest file or cartridge), Direct Input (copy
and paste the contents of an ims manifest file into the field), Upload Manifest (upload an ims
manifest file to be validated) or Upload Cartridge (upload an entire common cartridge to be
validated). There is also a SOAP Webservice and a HTTP+POX Service. They can both take direct
input or one or more URLs separated by commas or a Base64 encoded bytes array of a cartridge.
You may optionally provide direct input or a URL to an XSL file as a parameter. Doing so will style
the results returned from the service. You may also specify a profile version.
Click here for details.

To fully support this important work join the non-profit Common
Cartridge & Learning Tools Interoperability Alliance

What is Common Cartridge?
Common Cartridge is the first of three major standards that
comprise a new generation of Digital Learning Services
standards to support a new generation of learning technology.
These are:

Organized and distributed digital learning content (Common
Cartridge - CC)

Applications, systems, and mash-ups (Learning Tools
Interoperability - LTI)

Learner information: privileges and outcomes (Learning
Information Services - LIS)

Common Cartridge & Learning Tools Interoperability Alliance
Website Login

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About Common Cartridge

Common Cartridge Frequently Asked Questions

Common Cartridge Specification

IMS Conformance Certifications Directory

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Once you choose the file, it is uploaded and processed. Then the validator produces a report something like this. If there are only green check marks, the cartridge is valid, if there are red x marks, there are some problems.

This is an example of a fully valid cartridge:

Cartridge: ElectricalTheoryIC101IC101.imscc

Identifier: _6c8b1c41-01c9-4ce7-ad8c-71bd11ca8d30
Tuesday, March 17, 2015 12:26 AM PDT
Click to view results as plain text. | Click to view links in html.

List of all Files Validated:

- imsmanifest.xml
- assessments/1 - 19df6a66-b147-412a-86b7-d006ddc22d32.xml
- assessments/2 - faff617e-d22f-496c-80e0-6821e24054f9.xml
- assessments/3 - a35465d8-aef2-49d0-877d-fbc9853ba19e.xml
- assessments/4 - 247024bf-9383-475d-9aac-6ebba287193e.xml
- assessments/5 - 745a843d-87c7-4864-ae8e-73ee636936c7.xml
- assessments/6 - 0c9f89bd-717c-490f-a455-1edf4cabd47e.xml
- assessments/7 - 89bcb8d0-13d1-42f0-af33-a307d9eda0d4.xml
- assessments/8 - 3f737972-a8b4-47ab-ae2e-a7e316f860d3.xml
- assessments/9 - 8687f10f-91b4-4791-8936-18cd5bd6aaa1.xml
- assessments/10 - 533998d4-4f34-42b6-b4f8-659040e2f900.xml
- assessments/11 - cf205203-1dc6-4e0b-a96a-2a8e36e39081.xml
- assessments/12 - 4fbacbe2-5231-4dc2-9ed3-cc5c9e337dfa.xml
- assessments/13 - 4759ef1e-f233-4338-9499-1be1f706708a.xml
- assessments/14 - d848ca2a-fbc8-4e96-bc8a-b0ea2c45983f.xml
- discussionTopics/15 - 69128211-ad09-41f7-b9c5-7c7a3d29000c.xml
- discussionTopics/16 - c4b5419d-749b-4730-8959-bc161c79e5c8.xml
- discussionTopics/17 - bcd90c99-15b0-4a2b-94bb-555cfb7bc1d9.xml
- discussionTopics/18 - a0a0fd2e-29cd-45f5-b271-0e32c4fef4a3.xml
- discussionTopics/19 - b0a681bd-1452-4379-93c8-ae833023589c.xml
- discussionTopics/20 - 8326a4bc-e30b-45c7-b56b-983e1023d866.xml
- discussionTopics/21 - 08ecb528-4a79-41df-a570-a81a6b86b8f9.xml
- discussionTopics/22 - 2ed3ef5f-87a3-417f-a26d-05fa8c711b31.xml
- discussionTopics/23 - d651c74a-3b4e-4c22-aa93-ae9a8f1419ff.xml
- discussionTopics/24 - 0c22d856-e8a7-43a5-888e-27ae4a46e006.xml
- discussionTopics/25 - 804e77e9-b2c4-4475-82ea-cfd9270812c5.xml

Resource Validation Results: The document is valid.

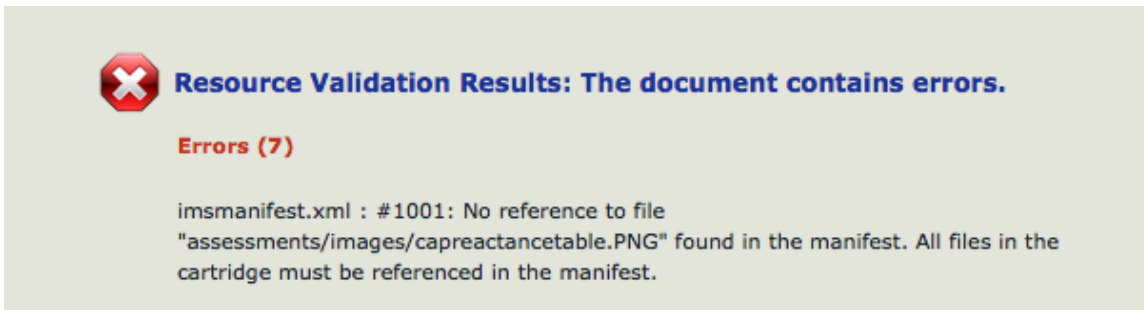**Schema Location Results: Schema locations are valid.**

Schema Validation Results: The document is valid.

Schematron Validation Results: The document is valid.

This is an example of a cartridge that contains errors:

Resource Validation Results: The document contains errors.

Errors (7)

imsmanifest.xml : #1001: No reference to file
"assessments/images/capreactancetable.PNG" found in the manifest. All files in the
cartridge must be referenced in the manifest.

In the case of an export from Jenzabar or elsewhere, should you encounter an error, you can bring this to the attention of the LMS vendor. If you want to attempt to repair the cartridge on your own, here are the steps. If you get stuck, feel free to contact Skills Commons in case we can help.

First, unzip the cartridge; an imscc file is just a zip.

Second, the error message above may be referring to image files associated with assessment items. The image files themselves were not referenced in the imsmanifest.xml and must be listed there. The references to the image files in the assessment items used the pattern $IMS-CC-FILEBASE$../assessments/images. The two periods should be omitted.
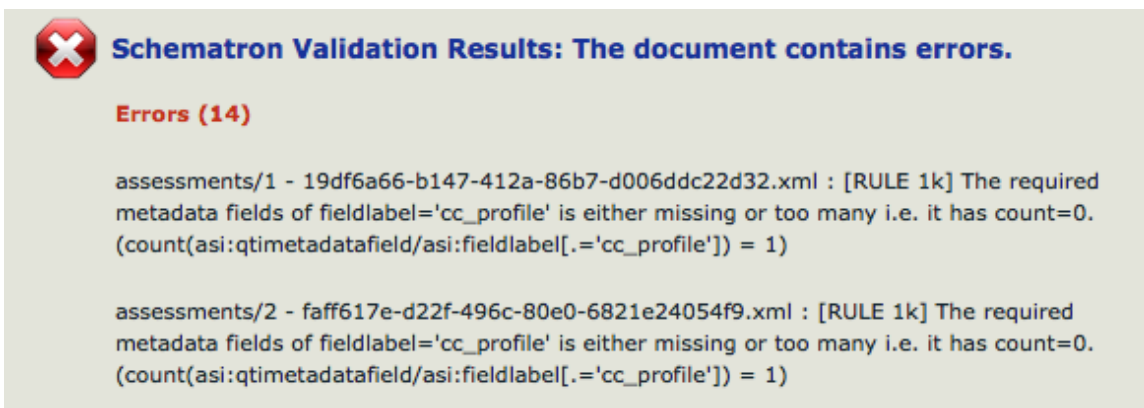
So, change this:

$IMS-CC-FILEBASE$../assessments/images

to this:

$IMS-CC-FILEBASE$/assessments/images

Third, if you encounter an error like this:

Schematron Validation Results: The document contains errors.

Errors (14)

assessments/1 - 19df6a66-b147-412a-86b7-d006ddc22d32.xml : [RULE 1k] The required
metadata fields of fieldlabel='cc_profile' is either missing or too many i.e. it has count=0.
(count(asi:qtimetadatafield/asi:fieldlabel[.='cc_profile']) = 1)

assessments/2 - faff617e-d22f-496c-80e0-6821e24054f9.xml : [RULE 1k] The required
metadata fields of fieldlabel='cc_profile' is either missing or too many i.e. it has count=0.
(count(asi:qtimetadatafield/asi:fieldlabel[.='cc_profile']) = 1)

The assessment XML files are missing a qtimetadata field element near the top of each file.

So, for example, change this:

```
  <assessment ident="Series/Parallel Circuit Lab" title="Series/Parallel Circuit
Lab">

    <qtimetadata>

      <qtimetadatafield>

        <fieldlabel>cc_maxattempts</fieldlabel>

        <fieldentry>1</fieldentry>

      </qtimetadatafield>

    </qtimetadata>
```

to this:

```
  <assessment ident="Series/Parallel Circuit Lab" title="Series/Parallel Circuit
Lab">

    <qtimetadata>

      <qtimetadatafield>

        <fieldlabel>cc_profile</fieldlabel>

        <fieldentry>cc.exam.v0p1</fieldentry>

      </qtimetadatafield>

      <qtimetadatafield>

        <fieldlabel>cc_maxattempts</fieldlabel>

        <fieldentry>1</fieldentry>

      </qtimetadatafield>

    </qtimetadata>
```

Fourth, re-zip the package back to something with the extension .imscc.

Fifth, re-run the validator.

This document has covered how to run the IMS Common Cartridge validator in general and how to repair some known issues with files created by Jenzabar in particular. Since the specifications and products involved may change over time, consult with your LMS vendors, IMS, and Skills Commons as appropriate.