



**IXIASOFT**

# **Upgrading the DITA CMS to use DITA 1.3**

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## Should I upgrade?

While the DITA CMS ships with DITA 1.3 integrated, you can use DITA 1.3 with earlier versions of the DITA CMS as well. These instructions apply to versions of the DITA CMS that do not ship with DITA 1.3 natively integrated.

If you want to take advantage of the new DITA 1.3 features, which include scoped keys, ditavalref, the troubleshooting topic type, Release Management (not to be confused with the DRM module of the CMS), and the XML mention domain--among others--then yes, you should upgrade. If you do not need any of these features, you do not need to upgrade right now.

If you upgrade to DITA 1.3, all content that you created using DITA 1.2 remains valid. You do not have to make any changes to it. Also, even if you upgrade, you are not obligated to use any of the new DITA 1.3 features. However, unless you have specific use cases for upgrading to DITA 1.3, IXIASOFT does not recommend doing so.

**Important:** If you want to use the new DITA 1.3 features, you must also upgrade the DITA Open Toolkit (DITA OT) within the Output Generator to at least version 2.0. IXIASOFT recommends version 2.3 and the most recent versions of the Output Generator ship with DITA OT 2.3.1. Many custom plugins designed for earlier versions of the DITA OT do not work correctly with DITA OT 2.0+. This means that **if you commit to upgrading to DITA 1.3, you must also commit to upgrading the DITA OT to 2.0+ and possibly to upgrading your custom plugins as well.** Be prepared to set aside sufficient time and resources to complete all of these upgrades.

While it is theoretically possible to use two versions of DITA at the same time in the DITA CMS, IXIASOFT does not recommend it and is not prepared to support it.

### Dynamic Release Management (DRM) concerns for upgrading to DITA 1.3

All of the DRM functionality is defined within the `com.ixiasoft.dita13.dtd` plugin. By installing this plugin in your system configuration (as instructed in [Add the DITA 1.3 DTDs to the DITA CMS](#) on page 6), you automatically take care of any DRM concerns with respect to DITA 1.3. None of the pertinent files should be a part of your custom DTD plugin; therefore, you should not have any DRM-specific changes to make in your custom DTD plugin.

# About integrating MathML

When IXIASOFT integrated MathML into previous versions of the DITA CMS, the integration was based on a non-final version of the DITA 1.3 specification. The final integration is very slightly different from the original IXIASOFT integration (which we will call the "beta" integration). Even if you have content that incorporates MathML that follows the beta integration, it might not be invalidated if you use the official DITA 1.3 integration. It is probably worth your while to test this content to see. If you can use the official integration, it will avoid additional maintenance and support issues that could arise from using a non-DITA 1.3-conformant configuration.

IXIASOFT does not have any test scripts for MathML. The simplest approach is probably to setup up a test system with the official integration and generate output for content that includes MathML markup. If the outputs are successful, then you know that your MathML is valid under the official DITA 1.3 integration. If you have a small amount of non-valid MathML, it is still probably worth your while to refactor it to be conformant with the DITA 1.3 specification rather than to move forward with DITA 1.3 while using the beta MathML integration.

Some older versions of the DITA CMS, such as 3.4, might be using a MathML implementation that is based on MathML2. (How can you tell? Look in system/dtd. If there are `mathml2`, `mathml3` and `mathmlDomain` folders, it's possible you are using MathML2. Upgrading this implementation could be a bit trickier and content based on MathML2 might require additional refactoring. Contact IXIASOFT support for help.

# Updating the system configuration

## Add the DITA 1.3 DTDs to the DITA CMS

---

1. Download the `org.oasis-open.dita.v1_3` plugin from the [IXIASOFT download site](#).
2. Download the `com.ixiasoft.dita13.dtd` plugin from the [IXIASOFT download site](#).
3. Copy `org.oasis-open.dita.v1_3` and `com.ixiasoft.dita13.dtd` to `system/plugins`.

You can keep the DITA 1.2 DTDs in `system/dtd`. They will no longer be referenced but will be available should you ever decide to revert to DITA 1.2.

4. Remove `com.ixiasoft.dita.dtd` from `system/plugins`.

IXIASOFT recommends that you keep a copy of this plugin in a secure place.

5. Ensure that `org.w3c.svg1.0` and `org.w3c.svg1.1` are present in `system/plugins`.

If they are not, download them from [IXIASOFT download site](#) and add them to `system/plugins`.

## Update the master catalog

---

1. Check out and open `system/catalogs/master-catalog.xml`.
2. Change these lines.

```
<!-- Base DITA 1.2 catalog -->  
<nextCatalog catalog="../dtd/catalog-dita.xml"/>
```

to

```
<!--Base DITA 1.3 catalog -->  
<nextCatalog catalog="../plugins/org.oasis-open.dita.v1_3/  
¶catalog.xml"/>
```

**Note:** The ¶ symbol indicates a manual line break that has been inserted here for formatting. There should be no actual line break in the code.

3. Change these lines.

```
<!-- IXIASOFT specializations -->  
<nextCatalog catalog="../plugins/com.ixiasoft.dita.dtd/catalog.xml"/>
```

to

```
<!-- IXIASOFT specializations -->
<nextCatalog catalog="../plugins/com.ixiasoft.dita13.dtd/
  catalog.xml"/>
```

#### 4. Save and check in master-catalog.xml.

## Add the Troubleshooting topic template

---

1. Download the troubleshooting.xml template from the [IXIASOFT download site](#) and copy it to *system/templates/topics*.
2. Check out and open troubleshooting.xml.
3. Change the template's doctype declaration to match that of your other topic templates.
4. Save and check in troubleshooting.xml.

## Add the subjectScheme map template

---

- Download the subjectScheme.ditamap template from the [IXIASOFT download site](#) and copy it to *system/templates/maps*.

## Update access rights

---

If you have any methods in *system/conf/accessrights.xml* that are set to use specializations, so that each topic and map type is listed (for example, `<type name="concept">`, `<type name="task">`, etc. rather than simply `<type name="topic">`), be sure to add appropriate entries for `<type name="troubleshooting">`.

## Update ditaclasses.xml

---

This procedure is necessary only if you use the Publish option within the DITA CMS. You can complete it in any case, but it is essential if you plan to Publish any content that includes troubleshooting topics or subjectScheme maps. If you do not use the Publish function, you do not need to complete this procedure.

1. Check out and open *system/conf/ditaclasses.xml*.

## 2. Add the following to the file.

```
<class name="- topic/topic troubleshooting/troubleshooting "
  path="//*[contains(@class, 'topic ')]/prolog/metadata"
  position="//*[contains(@class, 'topic ')]/
  ¶/prolog/metadata/unknown|//*[contains(@class, 'topic ')]
  ¶/prolog/metadata/foreign|//*[contains(@class, 'topic ')]
  ¶/prolog/metadata/data-about|//*[contains(@class, 'topic ')]
  ¶/prolog/metadata/data"
  type="troubleshooting" variables="false"/>
```

**Note:** The ¶ symbol indicates a manual line break that has been inserted here for formatting. There should be no actual line break in the code.

IXIASOFT recommends that you add this after the <class> element that begins <class name="- topic/topic concept/concept glossgroup/glossgroup.

## 3. Add the following to *system/conf/ditaclasses.xml*.

```
<class name="- map/map subjectScheme/subjectScheme "
  path="*/topicmeta" position="*/topicmeta/unknown|
  ¶/*/topicmeta/foreign|*/topicmeta/data-about|*/
  ¶/topicmeta/data|*/topicmeta/resourceid"
  type="subjectScheme" variables="false"/>
```

IXIASOFT recommends that you add this after the <class> element that begins <class name="- map/map bookmap/bookmap.

## 4. Save and check in *ditaclasses.xml*.

# Update equivalence.xml

You must tell the DITA CMS that any troubleshooting topics you create should be treated like concept, reference, task, glossentry, etc. for the purposes of Search and other functions.

1. Check out and open *system/conf/equivalence.xml*.
2. Add the following line to the section that begins <equivalence type="topic".

```
<object type="troubleshooting"/>
```

## 3. Save and check in *equivalence.xml*.

# Update systemid.xml

You must tell the DITA CMS how to refactor the doctype declaration for any subjectScheme maps that you import. In previous releases of the DITA CMS, there were separate DTDs for subjectScheme maps and therefore a unique doctype declaration for them. IXIASOFT's

implementation of DITA 1.3 integrates subjectScheme into the shell map DTD and therefore subjectScheme maps use the same doctype declaration as maps and bookmaps.

1. **Check out and open** *system/conf/systemid.xml*.
2. **Delete the following line.**

```
<reference public="-//OASIS//DTD DITA Subject Scheme Map//EN"  
¶system="subjectScheme.dtd"/>
```

**Note:** The ¶ symbol indicates a manual line break that has been inserted here for formatting. There should be no actual line break in the code.

3. **Save and check in** *systemid.xml*.

## Update systemversion.xml

---

1. **Check out and open** *system/systemversion.xml*.
2. **Change** `<dita version="1.2"... to <dita version="1.3"....`
3. **Save and check in** *systemversion.xml*.

# Updating custom topic and map shells

## About updating your topic and map shells

---

At this point, your process may vary. These instructions assume that you originally created your custom topic and map shells using the instructions provided in *Integrating DTDs for DITA 1.2 into the DITA CMS* on the IXIASOFT documentation page. If you created your custom shells otherwise, you will need to apply these steps in an appropriate way to your shells. Contact IXIASOFT Support if you are not sure how to proceed.

**Note:** While these instructions are very detailed, you might find it just as easy to compare or "diff" your topic or map shell and the copy of **IxiaDitabase.dtd** or **IxiaMap.dtd** found in **com.ixiasoft.dita13.dtd** and simply do a manual merge on the files.

## Update your custom topic shell

---

These steps assume a plugin name of **com.company.dita.dtd** and a topic shell name of **CompanyDitabase.dtd**. The steps also assume that **com.company.dita.dtd** is in *system/plugins*.

These steps also assume that your topic shell is essentially a copy of **IxiaDitabase.dtd**. If you have integrated additional element or attribute domains, you must make appropriate changes to those entity declarations which this procedure cannot anticipate.

In addition to the steps listed here, which apply regardless of the MathML integration you are using, there are additional steps that are specific to the MathML integration (beta or DITA 1.3) you have decided to use. Those steps are in separate procedures.

1. **Open** *system/plugins/com.ixiasoft.dita13.dtd/dtd/IxiaDitabase.dtd*.
2. **Check out and open** *system/plugins/com.company.dita.dtd/dtd/CompanyDitabase.dtd*.
3. **In *CompanyDitabase.dtd*, find the TOPIC ENTITY DECLARATIONS section.**

Compare each entity in the section to the corresponding entity in the TOPIC ENTITY DECLARATIONS section of **IxiaDitabase.dtd**. For example:

```
(CompanyDitabase.dtd)
<!ENTITY % concept-dec
  PUBLIC "-//OASIS//ENTITIES DITA 1.2 Concept//EN"
  "../../../dtd/technicalContent/dtd/concept.ent"
>%concept-dec;
```

```
(IxiaDitabase.dtd)
<!ENTITY % concept-dec
  PUBLIC "-//OASIS//ENTITIES DITA 1.3 Concept//EN"
```

```

    ".../..../org.oasis-open.dita.v1_3/dtd/technicalContent/dtd/
    ¶concept.ent"
>%concept-dec;

```

**Note:** The ¶ symbol indicates a manual line break that has been inserted here for formatting. There should be no actual line break in the code.

Notice that the public id of the entities in **IxiaDitabase.dtd** (which uses DITA 1.3) references DITA 1.3. Notice also that the relative path in the system id of the entities in **CompanyDitabase.dtd** point to the DITA 1.2 DTDs that are in *system/dtd* while the relative path in the system id of the entities in **IxiaDitabase.dtd** point to the DITA 1.3 DTDs that are in *system/plugins/org.oasis-open.dita.v1\_3/dtd*.

4. **Change the public id of each entity in the TOPIC ENTITY DECLARATIONS section of CompanyDitabase.dtd to reference DITA 1.3 rather than DITA 1.2.**
5. **Change the relative path in the system id of each entity in the TOPIC ENTITY DECLARATIONS section of CompanyDitabase.dtd to point to the DITA 1.3 DTDs that are in *system/plugins/org.oasis-open.dita.v1\_3/dtd* rather than the DITA 1.2 DTDs that are in *system/dtd*.**

You can select just the *../..../* part of each path and replace it with *../..../org.oasis-open.dita.v1\_3/*. The remainder of the path is always the same.

### Important:

This simple replacement depends on your DTD plugin being in *system/plugins* and having exactly this structure:

```

system
|_plugins
|_com.company.dita.dtd
|_dtd
|_CompanyDitabase.dtd
|_CompanyMap.dtd

```

If your plugin is in any other location or if the folder structure differs (for example, your DTDs are in a subfolder of the */dtd* subfolder, or they are not in a */dtd* subfolder at all), you must calculate the correct relative path between *CompanyDitabase.dtd* and the DTDs in **org.oasis-open.dita.v1\_3**.

6. **Add the following to the TOPIC ENTITY DECLARATIONS section of CompanyDitabase.dtd.**

```

<!ENTITY % troubleshooting-dec
PUBLIC "-//OASIS//ENTITIES DITA 1.3 Troubleshooting//EN"
    ".../..../org.oasis-open.dita.v1_3/dtd/technicalContent/dtd/

```

```

    {troubleshooting.ent"
>%troubleshooting-dec;

```

**Note:** You can add this anywhere in the TOPIC ENTITY DECLARATIONS section; the order of the declarations does not matter.

7. Repeat the same comparison and update to public and system id's for each entity in the DOMAIN ENTITY DECLARATIONS section of CompanyDitabase.dtd.
8. Add the following to the DOMAIN ENTITY DECLARATIONS section of CompanyDitabase.dtd.

```

<!ENTITY % markup-d-dec
  PUBLIC "-//OASIS//ENTITIES DITA 1.3 Markup Domain//EN"
         ".../org.oasis-open.dita.v1_3/dtd/technicalContent/dtd/
         {markupDomain.ent"
>%markup-d-dec;

<!ENTITY % relmgmt-d-dec
  PUBLIC "-//OASIS//ENTITIES DITA 1.3 Release Management Domain//EN"
         ".../org.oasis-open.dita.v1_3/dtd/technicalContent/dtd/
         {releaseManagementDomain.ent"
>%relmgmt-d-dec;

<!ENTITY % svg-d-dec
  PUBLIC "-//OASIS//ENTITIES DITA 1.3 SVG Domain//EN"
         ".../org.oasis-open.dita.v1_3/dtd/technicalContent/dtd/
         {svgDomain.ent"
>%svg-d-dec;

<!ENTITY % xml-d-dec
  PUBLIC "-//OASIS//ENTITIES DITA 1.3 XML Domain//EN"
         ".../org.oasis-open.dita.v1_3/dtd/technicalContent/dtd/
         {xmlDomain.ent"
>%xml-d-dec;

```

**Note:** You can add these anywhere in the DOMAIN ENTITY DECLARATIONS section; the order of the declarations does not matter.

9. When you come to the section that begins `<!-- ===== MathML Integration ===== -->`, skip it for now.
10. In the DOMAIN ATTRIBUTE DECLARATIONS section of CompanyDitabase.dtd, add the following.

```

<!ENTITY % deliveryTargetAtt-d-dec
  PUBLIC "-//OASIS//ENTITIES DITA 1.3 Delivery Target Attribute Domain//EN"
         ".../org.oasis-open.dita.v1_3/dtd/base/dtd/
         {deliveryTargetAttDomain.ent"
>%deliveryTargetAtt-d-dec;

```

**Note:** You can add these anywhere in the DOMAIN ATTRIBUTE DECLARATIONS section; the order of the declarations does not matter.

**11. For the *localization-loc-d-dec* entity, change the system id from**

```
../../../../com.ixiasoft.dita.dtd/dtd/localizationDomain.ent
```

to

```
../../../../com.ixiasoft.dita13.dtd/dtd/localizationDomain.ent
```

**12. In the DOMAIN EXTENSIONS section of CompanyDitabase.dtd, add these entities.**

```
<!ENTITY % data          "data |
                          %ut-d-data;
                          ">
<!ENTITY % metadata      "metadata |
                          %relmgmt-d-metadata;
                          ">
```

**Note:** You can add these anywhere in the DOMAIN EXTENSIONS section; the order of the extensions does not matter.

**13. Edit the keyword entity as follows.**

```
<!ENTITY % keyword       "keyword |
                          %markup-d-keyword; |
                          %pr-d-keyword; |
                          %sw-d-keyword; |
                          %ui-d-keyword; |
                          %xml-d-keyword;
                          ">
```

**14. For now, ignore the remainder of the items that follow the <!-- =====  
MathML Integration ===== --> comment.****15. In the DOMAIN ATTRIBUTE EXTENSIONS section of CompanyDitabase.dtd, replace**

```
<!ENTITY % props-attribute-extensions "" >
```

to

```
<!ENTITY % props-attribute-extensions
"%deliveryTargetAtt-d-attribute;"
>
```

**Important:** If you have already specialized attributes from @props, simply add %deliveryTargetAtt-d-attribute; to that list; do not replace the entire entity declaration.

**16. In the TOPIC NESTING OVERRIDE section of CompanyDitabase.dtd, add the troubleshooting topic to the end of the *info-types* entity, as shown.**

```
<!ENTITY % info-types    "topic | concept | task | reference |
                          glossentry | glossgroup | troubleshooting">
```

**17. In the DOMAINS ATTRIBUTE OVERRIDE section of CompanyDitabase.dtd, add the following domains to the list, as shown.**

```
...
&troubleshooting-att;
&deliveryTargetAtt-d-att;
&markup-d-att;
&relmgmt-d-att;
&svg-d-att;
&xml-d-att;
```

**Note:** You can add these anywhere in the DOMAINS ATTRIBUTE OVERRIDE section; the order of the overrides in the list does not matter.

**18. For now, ignore the section that begins Add the following domains for MathML integration.**

**19. In the CONTENT CONSTRAINT INTEGRATION section of CompanyDitabase.dtd, change the public id of the *strictTaskbody-c-def* entity to refer to DITA 1.3 instead of DITA 1.2.**

```
-//OASIS//ELEMENTS DITA 1.2 Strict Taskbody Constraint//EN
```

to

```
-//OASIS//ELEMENTS DITA 1.3 Strict Taskbody Constraint//EN
```

Even if you are not using this constraint (it is commented out), go ahead and make this change to be sure that if you ever do implement it, it is referring to the public id of the DITA 1.3 content model.

**20. Change the system id path of the *strictTaskbody-c-def* entity from**

```
../../../../dtd/technicalContent/dtd/strictTaskbodyConstraint.mod
```

to

```
../../../../org.oasis-open.dita.v1_3/dtd/technicalContent/dtd/
strictTaskbodyConstraint.mod
```

Even if you are not using this constraint (it is commented out), go ahead and make this change to be sure that if you ever do implement it, the path is pointing to the DITA 1.3 content model.

**21. Change the public id's of the *strictPara-c-def* and *strictSection-c-def* entities to refer to DITA 1.3 instead of DITA 1.2.**

If the public id's do not refer to a specific DITA version, leave them as-is.

22. Change the name of the plugin in the system id path of the *strictPara-c-def* and *strictSection-c-def* entities from `com.ixiasoft.dita.dtd` to `com.ixiasoft.dita13.dtd`.
23. In the TOPIC ELEMENT INTEGRATION section of `CompanyDitabase.dtd` compare the public and system id's of each entity to those of the corresponding entity in the TOPIC ELEMENT INTEGRATION section of `IxiaDitabase.dtd`.
24. Change the public id of each entity in the TOPIC ELEMENT INTEGRATION section of `CompanyDitabase.dtd` to reference DITA 1.3 rather than DITA 1.2.

**Note:** Do not make this change to the *referable-content-typemod* entity.

25. Change the relative path in the system id of each entity in the TOPIC ELEMENT INTEGRATION section of `CompanyDitabase.dtd` to point to the DITA 1.3 DTDs that are in `system/plugins/org.oasis-open.dita.v1_3/dtd` rather than the DITA 1.2 DTDs that are in `system/dtd`.

**Note:** Do not make this change to the *referable-content-typemod* entity.

26. Change the name of the plugin in the system id path of the *referable-content-typemod* entity from `com.ixiasoft.dita.dtd` to `com.ixiasoft.dita13.dtd`.
27. In the TOPIC ELEMENT INTEGRATION section of `CompanyDitabase.dtd`, add the following.

```
<!ENTITY % troubleshooting-typemod
  PUBLIC "-//OASIS//ELEMENTS DITA 1.3 Troubleshooting//EN"
  "../../../org.oasis-open.dita.v1_3/dtd/technicalContent/dtd/
  ¶troubleshooting.mod"
>%troubleshooting-typemod;
```

**Note:** You can add this anywhere in the TOPIC ELEMENT INTEGRATION section; the order of the entities does not matter.

28. In the DOMAIN ELEMENT INTEGRATION section of `CompanyDitabase.dtd` compare the public and system id's of each entity to those of the corresponding entity in the DOMAIN ELEMENT INTEGRATION section of `IxiaDitabase.dtd`.
29. Change the public id of each entity in the DOMAIN ELEMENT INTEGRATION section of `CompanyDitabase.dtd` to reference DITA 1.3 rather than DITA 1.2.
30. Change the relative path in the system id of each entity in the DOMAIN ELEMENT INTEGRATION section of `CompanyDitabase.dtd` to point to the DITA 1.3 DTDs that are in `system/plugins/org.oasis-open.dita.v1_3/dtd` rather than the DITA 1.2 DTDs that are in `system/dtd`.

### 31. In the DOMAIN ELEMENT INTEGRATION section of CompanyDatabase.dtd, add the following.

```

<!ENTITY % markup-d-def
PUBLIC "-//OASIS//ELEMENTS DITA 1.3 Markup Domain//EN"
"../../../../org.oasis-open.dita.v1_3/dtd/technicalContent/dtd/
  markupDomain.mod"
>%markup-d-def;

<!ENTITY % relmgmt-d-def
PUBLIC "-//OASIS//ELEMENTS DITA 1.3 Release Management Domain//EN"
"../../../../org.oasis-open.dita.v1_3/dtd/technicalContent/dtd/
  releaseManagementDomain.mod"
>%relmgmt-d-def;

<!ENTITY % svg-d-def
PUBLIC "-//OASIS//ELEMENTS DITA 1.3 SVG Domain//EN"
"../../../../org.oasis-open.dita.v1_3/dtd/technicalContent/dtd/
  svgDomain.mod"
>%svg-d-def;

<!ENTITY % xml-d-def
PUBLIC "-//OASIS//ELEMENTS DITA 1.3 XML Domain//EN"
"../../../../org.oasis-open.dita.v1_3/dtd/technicalContent/dtd/
  xmlDomain.mod"
>%xml-d-def;

```

**Note:** You can add these anywhere in the DOMAIN ELEMENT INTEGRATION section; the order of the entities does not matter.

### 32. When you come to the third section that begins `<!-- ===== MathML Integration ===== -->`, skip it for now.

You have completed most of the changes needed to your topic shell, but you cannot stop here. You must apply some additional changes based on your implementation of MathML.

- If you are not currently using MathML and do not plan to, proceed to [Implementing the DITA 1.3 MathML integration](#) on page 22.
- If you are not currently using MathML and want to start using the DITA 1.3 MathML integration, proceed to [Implementing the DITA 1.3 MathML integration](#) on page 22.
- If you are currently using the beta MathML integration and want to move to the DITA 1.3 MathML integration, proceed to [Implementing the DITA 1.3 MathML integration](#) on page 22.
- If you are currently using the beta MathML integration and want to continue using it, proceed to [Retaining the beta MathML integration](#) on page 28.

## Update your custom map shell

These steps assume a plugin name of `com.company.dita.dtd` and a topic shell name of `CompanyMap.dtd`. The steps also assume that `com.company.dita.dtd` is in `system/plugins`.

These steps also assume that your map shell is essentially a copy of **IxiaMap.dtd**. If you have integrated additional element or attribute domains, you must make appropriate changes to those entity declarations which this procedure cannot anticipate.

1. **Open** *system/plugins/com.ixiasoft.dita.13.dtd/dtd/IxiaMap.dtd*.
2. **Check out and open** *system/plugins/com.company.dita.dtd/dtd/CompanyMap.dtd*.
3. **In CompanyMap.dtd, find the MAP ENTITY DECLARATIONS section.**

Compare each entity in the section to the corresponding entity in the MAP ENTITY DECLARATIONS section of **IxiaDitabase.dtd**. For example:

```
(CompanyMap.dtd)
<!ENTITY % bookmap-dec
  PUBLIC "-//OASIS//ENTITIES DITA 1.2 BookMap//EN"
         "../.../dtd/bookmap/dtd/bookmap.ent"
>%bookmap-dec;
```

```
(IxiaMap.dtd)
<!ENTITY % bookmap-dec
  PUBLIC "-//OASIS//ENTITIES DITA 1.3 BookMap//EN"
         "../.../org.oasis-open.dita.v1_3/dtd/bookmap/dtd/
         ¶bookmap.ent"
>%bookmap-dec;
```

**Note:** The ¶ symbol indicates a manual line break that has been inserted here for formatting. There should be no actual line break in the code.

Notice that the public id of the entities in **IxiaMap.dtd** (which uses DITA 1.3) references DITA 1.3. Notice also that the relative path in the system id of the entities in **CompanyMap.dtd** point to the DITA 1.2 DTDs that are in *system/dtd* while the relative path in the system id of the entities in **IxiaMap.dtd** point to the DITA 1.3 DTDs that are in *system/plugins/org.oasis-open.dita.v1\_3/dtd*.

4. **Change the public id of each entity in the MAP ENTITY DECLARATIONS section of CompanyMap.dtd to reference DITA 1.3 rather than DITA 1.2.**
5. **Change the relative path in the system id of each entity in the MAP ENTITY DECLARATIONS section of CompanyMap.dtd to point to the DITA 1.3 DTDs that are in *system/plugins/org.oasis-open.dita.v1\_3/dtd* rather than the DITA 1.2 DTDs that are in *system/dtd*.**

You can select just the *../.../* part of each path and replace it with *../.../org.oasis-open.dita.v1\_3/*. The remainder of the path is always the same.

**Important:**

This simple replacement depends on your DTD plugin being in *system/plugins*

and having exactly this structure:

```
system
|_plugins
|_com.company.dita.dtd
|_dtd
|_CompanyDitabase.dtd
|_CompanyMap.dtd
```

If your plugin is in any other location or if the folder structure differs (for example, your DTDs are in a subfolder of the /dtd subfolder, or they are not in a /dtd subfolder at all), you must calculate the correct relative path between **CompanyMap.dtd** and the DTDs in **org.oasis-open.dita.v1\_3**.

## 6. Add the following to the MAP ENTITY DECLARATIONS section of CompanyMap.dtd.

```
<!ENTITY % subjectScheme-dec
PUBLIC "-//OASIS//ENTITIES DITA Subject Scheme Map//EN"
"../../../../org.oasis-open.dita.v1_3/dtd/subjectScheme/dtd/
  $subjectScheme.ent"
>%subjectScheme-dec;
```

**Note:** You can add this anywhere in the MAP ENTITY DECLARATIONS section; the order of the declarations does not matter.

## 7. Repeat the same comparison and update to public and system id's for each entity in the DOMAIN ENTITY DECLARATIONS section of CompanyMap.dtd.

## 8. Add the following to the DOMAIN ENTITY DECLARATIONS section of CompanyMap.dtd.

```
<!ENTITY % ditavalref-d-dec
PUBLIC "-//OASIS//ENTITIES DITA 1.3 DITAVAl Ref Domain//EN"
"../../../../org.oasis-open.dita.v1_3/dtd/base/dtd/
  $ditavalrefDomain.ent"
>%ditavalref-d-dec;

<!ENTITY % markup-d-dec
PUBLIC "-//OASIS//ENTITIES DITA 1.3 Markup Domain//EN"
"../../../../org.oasis-open.dita.v1_3/dtd/technicalContent/dtd/
  $markupDomain.ent"
>%markup-d-dec;

<!ENTITY % relmgmt-d-dec
PUBLIC "-//OASIS//ENTITIES DITA 1.3 Release Management Domain//EN"
"../../../../org.oasis-open.dita.v1_3/dtd/technicalContent/dtd/
  $releaseManagementDomain.ent"
>%relmgmt-d-dec;

<!ENTITY % xml-d-dec
PUBLIC "-//OASIS//ENTITIES DITA 1.3 XML Domain//EN"
"../../../../org.oasis-open.dita.v1_3/dtd/technicalContent/dtd/
  $xmlDomain.ent"
>%xml-d-dec;
```

**Note:** You can add these anywhere in the DOMAIN ENTITY DECLARATIONS section; the order of the declarations does not matter.

**9. In the DOMAIN ATTRIBUTE DECLARATIONS section of CompanyMap.dtd, add the following.**

```
<!ENTITY % deliveryTargetAtt-d-dec
PUBLIC "-//OASIS//ENTITIES DITA 1.3 Delivery Target Attribute Domain//EN"
"../../../../org.oasis-open.dita.v1_3/dtd/base/dtd/
deliveryTargetAttDomain.ent"
>%deliveryTargetAtt-d-dec;
```

**Note:** You can add these anywhere in the DOMAIN ATTRIBUTE DECLARATIONS section; the order of the declarations does not matter.

**10. For the *localization-loc-d-dec* entity, change the system id from**

```
../../../../com.ixiasoft.dita.dtd/dtd/localizationDomain.ent
```

to

```
../../../../com.ixiasoft.dita13.dtd/dtd/localizationDomain.ent
```

**11. In the DOMAIN EXTENSIONS section of CompanyMap.dtd, add these entities.**

```
<!ENTITY % data "data |
%ut-d-data;
">
<!ENTITY % term "term |
%abbrev-d-term;
">
<!ENTITY % metadata "metadata |
%relmgmt-d-metadata;
">
```

**Note:** You can add these anywhere in the DOMAIN EXTENSIONS section; the order of the extensions does not matter.

**12. Edit the *keyword* entity as follows.**

```
<!ENTITY % keyword "keyword |
%markup-d-keyword; |
%pr-d-keyword; |
%sw-d-keyword; |
%ui-d-keyword; |
%xml-d-keyword;
">
```

**13. Edit the *topicref* entity as follows.**

```
<!ENTITY % topicref "topicref |
%ditavalref-d-topicref; |
(%mapgroup-d-topicref;) |
(%glossref-d-topicref;)
">
```

**14. In the DOMAIN ATTRIBUTE EXTENSIONS section of CompanyMap.dtd, replace**

```
<!ENTITY % props-attribute-extensions "" >
```

to

```
<!ENTITY % props-attribute-extensions
"%deliveryTargetAtt-d-attribute;"
>
```

**Important:** If you have already specialized attributes from @props, simply add %deliveryTargetAtt-d-attribute; to that list; do not replace the entire entity declaration.

**15. In the DOMAINS ATTRIBUTE OVERRIDE section of CompanyMap.dtd, add the following domains to the list, as shown.**

```
...
&subjectScheme-att;
&deliveryTargetAtt-d-att;
&ditavalref-d-att;
&markup-d-att;
&relmgmt-d-att;
&xml-d-att;
```

**Note:** You can add these anywhere in the DOMAINS ATTRIBUTE OVERRIDE section; the order of the overrides in the list does not matter.

**16. In the MAP ELEMENT INTEGRATION section of CompanyMap.dtd compare the public and system id's of each entity to those of the corresponding entity in the TOPIC ELEMENT INTEGRATION section of IxiaDatabase.dtd.****17. Change the public id of each entity in the MAP ELEMENT INTEGRATION section of CompanyMap.dtd to reference DITA 1.3 rather than DITA 1.2.****18. Change the relative path in the system id of each entity in the MAP ELEMENT INTEGRATION section of CompanyMap.dtd to point to the DITA 1.3 DTDs that are in *system/plugins/org.oasis-open.dita.v1\_3/dtd* rather than the DITA 1.2 DTDs that are in *system/dtd*.****19. In the MAP ELEMENT INTEGRATION section of CompanyMap.dtd, add the following.**

```
<!ENTITY % subjectScheme-type
PUBLIC "-//OASIS//ELEMENTS DITA 1.3 Subject Scheme Map//EN"
"../../../../org.oasis-open.dita.v1_3/dtd/subjectScheme/dtd/
%subjectScheme.mod"
>%subjectScheme-type;
```

**Note:** You can add this anywhere in the MAP ELEMENT INTEGRATION section; the order of the entities does not matter.

20. In the **DOMAIN ELEMENT INTEGRATION** section of **CompanyMap.dtd** compare the public and system id's of each entity to those of the corresponding entity in the **DOMAIN ELEMENT INTEGRATION** section of **IxiaDatabase.dtd**.
21. Change the public id of each entity in the **DOMAIN ELEMENT INTEGRATION** section of **CompanyMap.dtd** to reference DITA 1.3 rather than DITA 1.2.
22. Change the relative path in the system id of each entity in the **DOMAIN ELEMENT INTEGRATION** section of **CompanyMap.dtd** to point to the DITA 1.3 DTDs that are in *system/plugins/org.oasis-open.dita.v1\_3/dtd* rather than the DITA 1.2 DTDs that are in *system/dtd*.
23. In the **DOMAIN ELEMENT INTEGRATION** section of **CompanyMap.dtd**, add the following.

```
<!ENTITY % ditavalref-d-def
  PUBLIC "-//OASIS//ELEMENTS DITA 1.3 DITAVAl Ref Domain//EN"
         "../../../org.oasis-open.dita.v1_3/dtd/base/dtd/
         [ditavalrefDomain.mod"
>%ditavalref-d-def;

<!ENTITY % markup-d-def
  PUBLIC "-//OASIS//ELEMENTS DITA 1.3 Markup Domain//EN"
         "../../../org.oasis-open.dita.v1_3/dtd/technicalContent/dtd/
         [markupDomain.mod"
>%markup-d-def;

<!ENTITY % relmgmt-d-def
  PUBLIC "-//OASIS//ELEMENTS DITA 1.3 Release Management Domain//EN"
         "../../../org.oasis-open.dita.v1_3/dtd/technicalContent/dtd/
         [releaseManagementDomain.mod"
>%relmgmt-d-def;

<!ENTITY % xml-d-def
  PUBLIC "-//OASIS//ELEMENTS DITA 1.3 XML Domain//EN"
         "../../../org.oasis-open.dita.v1_3/dtd/technicalContent/dtd/
         [xmlDomain.mod"
>%xml-d-def;
```

**Note:** You can add these anywhere in the **DOMAIN ELEMENT INTEGRATION** section; the order of the entities does not matter.

You have completed the changes needed to your topic shell. Because MathML content is only used within topics, there are no map shell changes to be made for MathML integration.

# Implementing the DITA 1.3 MathML integration

This section includes the procedures you need to follow to implement the DITA 1.3 MathML integration into the DITA CMS. Follow the procedure in this order.

1. **Delete the beta DITA 1.3 MathML plugins** on page 22
2. **Update the master catalog for DITA 1.3 MathML** on page 22
3. Depending on your decision:
  - If you are not currently using MathML and do not plan to: **Integrate DITA 1.3 MathML into your custom topic shell (if you are not currently using MathML)** on page 23
  - If you are not currently using MathML and want to start using the DITA 1.3 MathML integration: **Integrate DITA 1.3 MathML into your custom topic shell (if you are not currently using MathML)** on page 23
  - If you are currently using the beta MathML integration and want to move to the DITA 1.3 MathML integration: **Integrate DITA 1.3 MathML into your custom topic shell (if you are currently using MathML)** on page 26

## Delete the beta DITA 1.3 MathML plugins

---

1. **Remove the `org.oasis-open.dita.mathml.doctypes` and `org.w3c.mathml3` plugins from `system/plugins`.**

You no longer need separate plugins for MathML because it is integrated directly into DITA 1.3.

IXIASOFT recommends that you keep a copy of the discarded plugins in a secure place.

2. **Continue to **Update the master catalog for DITA 1.3 MathML** on page 22.**

## Update the master catalog for DITA 1.3 MathML

---

Follow this procedure if you have decided to use the DITA 1.3 MathML integration and you deleted the `org.oasis-open.dita.mathml.doctypes` and `org.w3c.mathml3` from the `system/plugins` folder.

1. **Check out and open `system/catalogs/master-catalog.xml`.**

## 2. Delete these lines.

```
<!-- MathML Domain -->
<nextCatalog catalog="../plugins/org.oasis-open.dita.mathml.doctypes/
¶catalog.xml"/>
<!-- MathML 3 DTDs -->
<nextCatalog catalog="../plugins/org.w3c.mathml3/catalog.xml"/>
```

**Note:** The ¶ symbol indicates a manual line break that has been inserted here for formatting. There should be no actual line break in the code.

## 3. Add the following lines.

```
<!-- Patch for MathML module that is not declared in DITA 1.3 catalogs -->
<public publicId="-//W3C//ENTITIES MathML 3.0 Qualified Names 1.0//EN"
¶uri="../plugins/org.oasis-open.dita.v1_3/dtd/technicalContent/dtd/mathml/
¶mathml3/mathml3-qname.mod"/>
```

## 4. Save and check in master-catalog.xml.

## 5. Proceed to **Retain the beta MathML integration in your topic shell** on page 29.

# Integrate DITA 1.3 MathML into your custom topic shell (if you are not currently using MathML)

You must already have completed the **Update your custom topic shell** on page 10 task.

You should also have decided to set up your system for the DITA 1.3 integration of MathML. Even though you are not currently using MathML, IXIASOFT strongly recommends that you lay the groundwork for potential future use and bring your DITA CMS into full DITA 1.3 conformance.

These steps assume a plugin name of **com.company.dita.dtd** and a topic shell name of **CompanyDatabase.dtd**. The steps also assume that **com.company.dita.dtd** is in *system/plugins*.

1. **Check out and open** *system/plugins/com.company.dita.dtd/dtd/CompanyDatabase.dtd*.
2. **Within the DOMAIN ENTITY DECLARATIONS section, find the section that begins** `<!--  
===== MathML Integration ===== -->`.
3. **Edit the system id paths in the *mathml-d-dec* and *equation-d-dec* entity declarations as follows.**

```
<!ENTITY % mathml-d-dec
PUBLIC "-//OASIS//ENTITIES DITA 1.3 MathML Domain//EN"
"../../../../org.oasis-open.dita.v1_3/dtd/technicalContent/dtd/
¶mathmlDomain.ent"
>%mathml-d-dec;

<!ENTITY % equation-d-dec
PUBLIC "-//OASIS//ENTITIES DITA 1.3 Equation Domain//EN"
"../../../../org.oasis-open.dita.v1_3/dtd/technicalContent/dtd/
```

```

    ¶equationDomain.ent"
>%equation-d-def;

```

**Note:** The ¶ symbol indicates a manual line break that has been inserted here for formatting. There should be no actual line break in the code.

4. Leave these two entity declarations commented out.
5. In the **DOMAIN EXTENSIONS** section, find the section that begins `<!--`

```

===== MathML Integration ===== -->
comment.

```

This section declares two override entities--for *foreign* and *p*--that are commented out. You don't want to do anything with the *p* entity declaration but you do need to work with the *foreign* entity declaration.

6. Copy the existing *foreign* entity declaration and paste it into the "active" list of overrides.
7. Edit the *foreign* entity declaration override as follows.

```

<!ENTITY % foreign      "foreign |
                        %svg-d-foreign;
                        ">

```

You have completed the integration of the SVG domain into your topic shell without also integrating MathML.

8. Edit the system id paths in the *mathml-d-def* and *equation-d-def* entity declarations as follows.

```

<!ENTITY % mathml-d-def
PUBLIC "-//OASIS//ELEMENTS DITA 1.3 MathML Domain//EN"
       "../org.oasis-open.dita.v1_3/dtd/technicalContent/dtd/
       ¶mathmlDomain.mod"
>%mathml-d-def;

<!ENTITY % equation-d-def
PUBLIC "-//OASIS//ELEMENTS DITA 1.3 Equation Domain//EN"
       "../org.oasis-open.dita.v1_3/dtd/technicalContent/dtd/
       ¶equationDomain.mod"
>%equation-d-def;

```

9. Leave these two entity declarations commented out.
10. Do one of the following.
  - If you do not want to begin using MathML at this time, save and check in **CompanyDitabase.dtd**. You have finished updating your topic shell.
  - If you do want to begin using MathML at this time, continue to the next step.

11. Within the **DOMAIN ENTITY DECLARATIONS** section, find the section that begins `<!--  
===== MathML Integration ===== -->`.
12. Uncomment the two entity declarations (*mathml-d-dec* and *equation-d-dec*) in that section.
13. In the **DOMAIN EXTENSIONS** section, find the *foreign* override entity declaration and edit it as follows.

```
<!ENTITY % foreign      "foreign |
                        %svg-d-foreign; |
                        %mathml-d-foreign;
                        ">
```

14. Below the comment `<!-- ===== MathML Integration  
===== -->`, add a *div* override entity declaration below the *foreign* override entity declaration, as shown

```
<!ENTITY % foreign      "foreign |
                        %svg-d-foreign; |
                        %mathml-d-foreign;
                        ">
<!ENTITY % div          "div |
                        %equation-d-div;
                        ">
```

These *p* and *foreign* entity declarations now also exist, commented out, below the comment `<!-- ===== MathML Integration ===== -->`. You can delete the commented-out copies or leave them as-is.

**Note:** Notice that the *p* entity declaration is not used at all in the DITA 1.3 MathML integration. Instead, there is a *div* entity declaration. This is the difference between the beta MathML integration and the DITA 1.3 MathML integration--the `<div>` element is extended rather than the `<p>` element. The `<div>` element is new in DITA 1.3.

15. In the **DOMAINS ATTRIBUTE OVERRIDE** section, find the comment `Add the following domains for MathML integration` and note the two domains just below the comment (`&mathml-d-att;` and `&equation-d-att;`).
16. Add these two domains to the list just before the `Add the following domains for MathML integration` comment.

**Note:** You can add them in any order. The order of domains in this list do not matter.

17. Within the **DOMAIN ELEMENT INTEGRATION** section, find the section that begins `<!--  
===== MathML Integration ===== -->`.
18. Uncomment the two entity declarations (*mathml-d-def* and *equation-d-def*) in that section.

## 19. Save and check in `CompanyDitabase.dtd`.

You have finished updating your topic shell, including the implementation of the DITA 1.3 MathML integration.

# Integrate DITA 1.3 MathML into your custom topic shell (if you are currently using MathML)

---

You must already have completed the [Update your custom topic shell](#) on page 10 task.

You should also have decided to implement the DITA 1.3 integration of MathML, which IXIASOFT strongly recommends as it brings your DITA CMS into full DITA 1.3 conformance.

These steps assume a plugin name of `com.company.dita.dtd` and a topic shell name of `CompanyDitabase.dtd`. The steps also assume that `com.company.dita.dtd` is in `system/plugins`.

1. **Check out and open** `system/plugins/com.company.dita.dtd/dtd/CompanyDitabase.dtd`.
2. **Within the DOMAIN ENTITY DECLARATIONS section, find the section that begins** `<!--  
===== MathML Integration ===== -->`.
3. **Edit the system id paths in the `mathml-d-dec` and `equation-d-dec` entity declarations as follows.**

```
<!ENTITY % mathml-d-dec
  PUBLIC "-//OASIS//ENTITIES DITA 1.3 MathML Domain//EN"
         "../..//org.oasis-open.dita.v1_3/dtd/technicalContent/dtd/
         ¶mathmlDomain.ent"
>%mathml-d-dec;

<!ENTITY % equation-d-dec
  PUBLIC "-//OASIS//ENTITIES DITA 1.3 Equation Domain//EN"
         "../..//org.oasis-open.dita.v1_3/dtd/technicalContent/dtd/
         ¶equationDomain.ent"
>%equation-d-dec;
```

**Note:** The ¶ symbol indicates a manual line break that has been inserted here for formatting. There should be no actual line break in the code.

Verify that these two entity declarations are uncommented; you uncommented them when you originally implemented the beta MathML integration.

4. **In the DOMAIN EXTENSIONS section, find the section that begins** `<!--  
===== MathML Integration ===== -->  
comment.`

This section declares two override entities--for `foreign` and `p`--that you uncommented when you originally implemented the beta MathML integration.

## 5. Edit the *foreign* entity declaration as follows.

```
<!ENTITY % foreign          "foreign |
                             %mathml-d-foreign; |
                             %svg-d-foreign;
                             ">
```

**Note:** Notice that the `<foreign>` element is not only extended by the MathML domain but also by the SVG domain.

## 6. Edit the *p* entity declaration override as follows.

```
<!ENTITY % div              "div |
                             %equation-d-div;
                             ">
```

**Note:** Notice that the *p* entity declaration is not used at all in the DITA 1.3 MathML integration. Instead, there is a *div* entity declaration. This is the difference between the beta MathML integration and the DITA 1.3 MathML integration--the `<div>` element is extended rather than the `<p>` element. The `<div>` element is new in DITA 1.3.

## 7. In the DOMAINS ATTRIBUTE OVERRIDE section, verify that the *&mathml-d-att;* and *&equation-d-att;* entities are present in the list.

You added them to the list when you originally implemented the beta MathML integration.

## 8. In the DOMAIN ELEMENT INTEGRATION section, edit the system id paths in the *mathml-d-def* and *equation-d-def* entity declarations as follows.

```
<!ENTITY % mathml-d-def
  PUBLIC "-//OASIS//ELEMENTS DITA 1.3 MathML Domain//EN"
  "../../../org.oasis-open.dita.v1_3/dtd/technicalContent/dtd/
  ¶mathmlDomain.mod"
>%mathml-d-def;

<!ENTITY % equation-d-def
  PUBLIC "-//OASIS//ELEMENTS DITA 1.3 Equation Domain//EN"
  "../../../org.oasis-open.dita.v1_3/dtd/technicalContent/dtd/
  ¶equationDomain.mod"
>%equation-d-def;
```

Verify that these two entity declarations are uncommented; you uncommented them when you originally implemented the beta MathML integration.

## 9. Save and check in *CompanyDitabase.dtd*.

You have finished updating your topic shell, including the implementation of the DITA 1.3 MathML integration.

# Retaining the beta MathML integration

This section includes the procedures you need to follow to retain the beta MathML integration in the DITA CMS while otherwise using DITA 1.3. Follow the procedures in this order.

1. **Verify the beta DITA 1.3 MathML plugins** on page 28
2. **Update the master catalog for DITA 1.3 MathML** on page 22
3. **Retain the beta MathML integration in your topic shell** on page 29

Again, the combination of DITA 1.3 and the beta MathML integration is not recommended. It leaves you with a gray-area configuration that is not fully DITA 1.3 conformant.

## Verify the beta DITA 1.3 MathML plugins

---

1. **Verify that the `org.oasis-open.dita.mathml.doctypes` and `org.w3c.mathml3` plugins are present in `system/plugins`.**
2. **Continue to [Verify the master catalog for beta MathML](#) on page 28.**

## Verify the master catalog for beta MathML

---

Follow this procedure if you have decided to continue using the beta MathML integration and you did not delete the `org.oasis-open.dita.mathml.doctypes` and `org.w3c.mathml3` from the `system/plugins` folder.

1. **Open `system/catalogs/master-catalog.xml`.**
2. **Verify that the following lines are present.**

```
<!-- MathML Domain -->
<nextCatalog catalog="../plugins/org.oasis-open.dita.mathml.doctypes/
¶catalog.xml"/>
<!-- MathML 3 DTDs -->
<nextCatalog catalog="../plugins/org.w3c.mathml3/catalog.xml"/>
```

**Note:** The ¶ symbol indicates a manual line break that has been inserted here for formatting. There should be no actual line break in the code.

3. **If they are not present, check out the file and add them.**
4. **Close (or save and check in) `master-catalog.xml`.**
5. **Continue to [Retain the beta MathML integration in your topic shell](#) on page 29.**

## Retain the beta MathML integration in your topic shell

---

You must already have completed the [Update your custom topic shell](#) on page 10 task.

These steps assume a plugin name of **com.company.dita.dtd** and a topic shell name of **CompanyDitabase.dtd**. The steps also assume that **com.company.dita.dtd** is in *system/plugins*.

No changes are required to **CompanyDitabase.dtd** to continue using the beta integration of MathML. Even though this approach requires the least work up-front, IXIASOFT does not recommend it. It leaves your DITA CMS not fully DITA 1.3 conformant. While the rest of your content is fully DITA 1.3 conformant, your MathML content is in a gray area--partially DITA 1.3 conformant and partially not. This approach could complicate future upgrades and content interchange with other organizations.

# Update the Output Generator

This procedure assumes you have completed all changes to **CompanyDatabase.dtd** and **CompanyMap.dtd** in your custom DTD plugin.

1. **Remove `com.ixiasoft.dita.dtd` from `%OutputGenDir%/data/%OT_Dir%/plugins`.**
2. **Add `org.oasis-open.dita.v1_3` and `com.ixiasoft.dita13.dtd` to `%OutputGenDir%/data/%OT_Dir%/plugins`.**
3. **Ensure that `org.w3c.svg1.0` and `org.w3c.svg1.1` are present in `%OutputGenDir%/data/%OT_Dir%/plugins`.**
4. **Add your custom DTD plugin to `%OutputGenDir%/data/%OT_Dir%/plugins`.**

Remember that only DITA OT versions 2.0 and newer can process DITA 1.3 content. If you need to upgrade the version of the DITA OT that is installed in your Output Generator, refer to the *Output Generator Administrator's Guide*, found on the IXIASOFT documentation page.

## 5. Do one of the following.

- If you are using the DITA 1.3 MathML integration, remove the **`org.oasis-open.dita.mathml.doctypes`** and **`org.w3c.mathml3`** plugins from `%OutputGenDir%/data/%OT_Dir%/plugins`.
- If you are using the beta MathML integration, verify the **`org.oasis-open.dita.mathml.doctypes`** and **`org.w3c.mathml3`** plugins are present in `%OutputGenDir%/data/%OT_Dir%/plugins`.

## 6. Run the `DITA-OT-[version]-integrator.bat` file found in `%OutputGenDir%/data`.

### Dynamic Release Management (DRM) concerns for upgrading the Output Generator to DITA 1.3

All of the DRM functionality is defined within the **`com.ixiasoft.dita13.dtd`** plugin. By installing this plugin in the Output Generator, you automatically take care of any DRM concerns with respect to DITA 1.3. None of the pertinent files should be a part of your custom DTD plugin; therefore, you should not have any DRM-specific changes to make in your custom DTD plugin.