

# Review A: Task elements

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## Table of contents

1 Topic and map document types.....	3
1.1 Task.....	3
1.1.1 General task.....	3
1.1.2 Strict task.....	4
2 Task elements.....	5
2.1 <chdesc>.....	5
2.2 <chdeschd>.....	5
2.3 <chhead>.....	5
2.4 <choice>.....	6
2.5 <choices>.....	6
2.6 <choicetable>.....	7
2.7 <choption>.....	8
2.8 <choptionhd>.....	9
2.9 <chrow>.....	9
2.10 <cmd>.....	9
2.11 <context>.....	10
2.12 <info>.....	10
2.13 <postreq>.....	11
2.14 <prereq>.....	11
2.15 <result>.....	12
2.16 <step>.....	13
2.17 <stepresult>.....	13
2.18 <steps>.....	14
2.19 <steps-informal>.....	14
2.20 <stepsection>.....	15
2.21 <steptroubleshooting>.....	16
2.22 <steps-unordered>.....	17
2.23 <stepxmp>.....	17
2.24 <task>.....	18
2.25 <taskbody>.....	19
2.26 <tasktroubleshooting>.....	20
2.27 <tutorialinfo>.....	21
A Aggregated RFC-2119 statements.....	22
B Attributes.....	23
B.1 Attribute groups.....	23
B.2 Universal attribute group.....	36
B.3 Common attributes.....	41
B.4 STUB CONTENT.....	53
C Formatting suggestions.....	55
Index.....	<b>56</b>

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# 1 Topic and map document types

The Technical Content package contains various document types: concept, glossary entry, glossary group, reference, general task, strict task, and troubleshooting. The package also includes the bookmap document type.

## 1.1 Task

DITA **offers** two varieties of task topics: general task and strict task. **Both task topics serve the same purpose: to provide users with comprehensive instructions for performing a task. Their content models vary, however.**

### 1.1.1 General task

A general task topic answers the "How do I?" question by providing instructions and other necessary information that enables users to complete the task successfully. It has a content model that is more relaxed than that of the strict task.

#### Content model

The general task topic is divided into three parts:

##### Introduction

This portion of the topic can contain the following structural sections:

- Prerequisites: `<prerequisites>` (11)
- Contextual information: `<context>` (10)
- Sections: `<sections>`

These sections are all optional. They can appear in any order and can occur multiple times.

##### Procedural instructions

This portion of the topic can contain only one of the following structural sections:

- Steps: `<steps>` (14)
- Steps informal: `<steps-informal>` (14)
- Steps unordered: `<steps-unordered>` (17)

##### Post-instructions

The section of the topic can contain the following structural sections:

1. Result: `<result>` (12)
2. Troubleshooting information: `<tasktroubleshooting>` (20)
3. Example: `<example>`
4. Post-requisites: `<postreq>` (11)

While all of the above structural components are optional, they must occur in the outlined order. Examples and post-requisites can occur multiple times.

#### Example

---

## 1.1.2 Strict task

A strict task topic answers the "How do I?" question by providing precise step-by-step instructions and other necessary information that enables **users** to complete the task successfully.

### Content model

The strict task topic contains the following structural sections:

1. Prerequisites: `<prereq>` (11)
2. Contextual information: `<context>` (10)
3. Steps: `<steps>` (14) or `<steps-unordered>` (14)
4. Result: `<result>` (12)
5. Troubleshooting information: `<tasktroubleshooting>` (20)
6. Example: `<example>`
7. Post-requisites: `<postreq>` (11)

While all of the above structural components are optional, they must occur in the outlined order.

### Example

The following code sample contains a strict task topic:

```
<task id="birdhousebuilding">
  <title>Building a bird house</title>
  <shortdesc>Building a birdhouse is a perfect activity
for adults to share with their children or grandchildren.
It can be used to teach about birds, as well as the proper use of tools.
</shortdesc>
<taskbody>
  <prereq>To build a sound birdhouse, you will need a complete set of tools:
  <ul><li>hand saw</li>
    <li>hammer ... </li>
  </ul></prereq>
  <context>Birdhouses provide safe locations for birds to build nests and raise their young.
They also provide shelter during cold and rainy spells.</context>
  <steps>
    <step><cmd>Lay out the dimensions for the birdhouse elements.</cmd></step>
    <step><cmd>Cut the elements to size.</cmd></step>
    <step><cmd>Drill a 1 1/2" diameter hole for the bird entrance on the front.</cmd>
      <info>You need to look at the drawing for the correct placement of the
hole.</info></step>
    <!--...-->
  </steps>
  <result>You now have a beautiful new birdhouse!</result>
  <postreq>Now find a good place to mount it.</postreq>
</taskbody>
</task>
```

---

## 2 Task elements

**Task elements provide the fundamental structure for task topics.** The task topic includes sections for describing the context, prerequisites, actual steps, expected results, **troubleshooting**, example, and expected next steps for a task.

### 2.1 <chdesc>

The <chdesc> element provides the content of the second cell in a choice table row. This content **describes the option that users can take to complete the step, and it explains the result of the choice, if it is not immediately obvious.**

#### Specialization hierarchy

The <chdesc> element is specialized from <stentry>. It is defined in the task module.

#### Attributes

The following attributes are available on this element: [universal attributes](#) (36) and [table accessibility attributes](#) (42).

#### Example

See [<choicetable>](#) (7).

### 2.2 <chdeschd>

The <chdeschd> element provides a label for the second column in a choice table.

#### Specialization hierarchy

The <chdeschd> element is specialized from <stentry>. It is defined in the task module.

#### Attributes

The following attributes are available on this element: [universal attributes](#) (36) and [table accessibility attributes](#) (42).

#### Example

See [<choicetable>](#) (7).

### 2.3 <chhead>

The <chhead> element contains **elements that provide labels for the columns in** a choice table.

#### Rendering expectations

Labels provided by the <chhead> element override any default headings for the <choicetable> that **might be** provided by stylesheets.

## Specialization hierarchy

The `<chhead>` element is specialized from `<sthead>`. It is defined in the task module.

## Attributes

The following attributes are available on this element: [universal attributes](#) (36).

## Example

See `<choicetable>` (7).

## 2.4 `<choice>`

A `<choice>` element describes a way that **users** can complete the current step.

## Specialization hierarchy

The `<choice>` element is specialized from `<li>`. It is defined in the task module.

## Attributes

The following attributes are available on this element: [universal attributes](#) (36).

## Example

See `<choices>` (6)

## 2.5 `<choices>`

The `<choices>` element contains a list of choices. Each choice represents a way that **users** can complete the current step.

## Specialization hierarchy

The `<choices>` element is specialized from `<ul>`. It is defined in the task module.

## Attributes

The following attributes are available on this element: [universal attributes](#) (36).

## Example

The following code sample shows how a user can be presented with different ways to select a server:

```
<step><cmd>Choose a server:</cmd>
  <choices>
    <choice>If you have a remote server you want to test on, type the IP address
      or hostname of the server.</choice>
    <choice>If you want to do local testing, type localhost.</choice>
  </choices>
</step>
```

## 2.6 <choicetable>

A **choice table** provides information about a set of options for completing a step.

### Usage information

A choice table provides information when there is more than one way to complete a step. It is a simple table with two columns. The first cell in a row **names the option**, and the second cell in the row **describes the option that a user can take to complete the step**.

An optional header row can provide labels for the columns, if an author does not want to use the default labels that **might be** provided by stylesheets.

### Rendering expectations

If choice table does not contain a header row, processors typically auto-generate labels for the columns in the choice table.

### Specialization hierarchy

The <choicetable> element is specialized from <simpletable>. It is defined in the task module.

### Attributes

The following attributes are available on this element: [universal attributes](#) (36), [display attributes](#) (42), and [simpletable attributes](#) (42).

For this element, the @keycol attribute has a default value of "1".

### Examples

This section contains examples of how the <choicetable> element can be used.

#### Figure 1: Simple choice table

The following code sample contains a <choicetable> element that is used to explain the options that a user can take to cancel a job:

```
<step>
  <cmd>Select the option that you want:</cmd>
  <choicetable relcolwidth="1* 2*">
    <chrow>
      <choption>Cancel job</choption>
      <chdesc>The application attempts to cancel the job gracefully.
        The job might not be completely canceled, although the job
        status is "Canceled".</chdesc>
    </chrow>
    <chrow>
      <choption>Force the job to cancel</choption>
      <chdesc>The application will force the job to be canceled. This
        might result in a mismatch between the state file and the
        actual resource state.</chdesc>
    </chrow>
  </choicetable>
</step>
```

The choice table might be rendered in the following way. Note that the labels for the columns are contributed by the stylesheets that are used by the processor.

Option	Description
<b>Cancel the job</b>	The application attempts to cancel the job gracefully. The job might not be completely canceled, although the job status is "Canceled".
<b>Force the job to cancel</b>	The application will force the job to be canceled. This might result in a mismatch between the state file and the actual resource state.

Figure 2: Choice table with a header row

The following code sample contains a `<choicetable>` element that contains a header row. The choice table is used to provide users with instructions for creating a filter using either the command line or the graphical user interface. The header row is used to specify column labels of "Option" and "Action".

```

<step>
  <cmd>Create a new filter:</cmd>
  <choicetable>
    <chhead>
      <choptionhd>Option</choptionhd>
      <chdeschd>Action</chdeschd>
    </chhead>
    <chrow>
      <choption>Command-line interface</choption>
      <chdesc>Type <codeph>arg -f filter</codeph></chdesc>
    </chrow>
    <chrow>
      <choption>Product GUI</choption>
      <chdesc>Click <uicontrol>New Filter</uicontrol></chdesc>
    </chrow>
  </choicetable>
</step>

```

The choice table might be rendered in the following way:

Option	Action
<b>Command-line interface</b>	Type <code>arg -f filter</code>
<b>Product GUI</b>	Click <b>New Filter</b>

## 2.7 <choption>

The `<choption>` element contains the content of the first cell in a choice table row. This content names the option that users can take to complete the step.

### Specialization hierarchy

The `<choption>` element is specialized from `<stentry>`. It is defined in the task module.



## Attributes

The following attributes are available on this element: [universal attributes](#) (36) and [table accessibility attributes](#) (42).

## Example

See [<choicetable>](#) (7).

## 2.8 <choptionhd>

The `<choptionhd>` element provides a label for the first column in a choice table.

## Specialization hierarchy

The `<choptionhd>` element is specialized from `<stentry>`. It is defined in the task module.

## Attributes

The following attributes are available on this element: [universal attributes](#) (36) and [table accessibility attributes](#) (42).

## Example

See [<choicetable>](#) (7).

## 2.9 <chrow>

The `<chrow>` element represents a row in a choice table. It contains a pair of elements: `<choption>` and `<chdesc>`.

## Specialization hierarchy

The `<chrow>` element is specialized from `<strow>`. It is defined in the task module.

## Attributes

The following attributes are available on this element: [universal attributes](#) (36).

## Example

See [<choicetable>](#) (7).

## 2.10 <cmd>

A command **specifies the action that users take** to complete a step.

## Specialization hierarchy

The `<cmd>` element is specialized from `<ph>`. It is defined in the task module.

## Attributes

The following attributes are available on this element: [universal attributes](#) (36) and [@keyref](#) (47).

## Example

In the following code sample, the `<cmd>` element provides clear, active-voice instruction for how to complete a step:

```
<step>
  <cmd>Specify the configuration parameters.</cmd>
</step>
```

## 2.11 <context>

Contextual information is background information that helps users understand the purpose of the task and what they will gain by completing it.

### Rendering expectations

Implementations might want to consider having their stylesheets render a label for this element.

### Specialization hierarchy

The `<context>` element is specialized from `<section>`. It is defined in the task module.

### Attributes

The following attributes are available on this element: [universal attributes](#) (36).

## Example

An author uses the following markup to provide users with more contextual information than is appropriate for a short description. Style sheets might generate a label, for example, “About this procedure”, to indicate clearly that the information provided is background information.

```
<task id="Generating-stub-files" xml:lang="en-us">
  <title>Generating stub files</title>
  <shortdesc>You can use Task Modeler to generate stub files. Stub files are
    DITA files that contain only a title.</shortdesc>
  <taskbody>
    <context>As you perform this procedure, you can select the conventions that
      you want to use for file names.
    </context>
    <!-- ... -->
  </taskbody>
</task>
```

## 2.12 <info>

The `<info>` element contains additional information about the step.

### Specialization hierarchy

The `<info>` element is specialized from `<div>`. It is defined in the task module.

### Attributes

The following attributes are available on this element: [universal attributes](#) (36).

## Example

In the following code sample, the `<info>` element provides additional information about the ways that the step can be performed:

```
<step>
  <cmd>Specify the configuration parameters.</cmd>
  <info>You can use either the command line or the product GUI.
</info>
</step>
```

## 2.13 <postreq>

Post-requisites are steps or tasks that users **might** need to perform after completing the current task.

### Rendering expectations

Implementations might want to consider having their stylesheets render a label for this element.

### Specialization hierarchy

The `<postreq>` element is specialized from `<section>`. It is defined in the task module.

### Attributes

The following attributes are available on this element: [universal attributes](#) (36).

## Example

The following code sample shows how a user might be directed to notify a test proctor after completing a test.

```
<steps>
<!-- ... -->
  <step>
    <cmd>Click <uicontrol>Done</uicontrol> to complete the test.</cmd>
  </step>
</steps>
<postreq>Notify the proctor upon completing this self-test.</postreq>
```

## 2.14 <prereq>

Prerequisites are things that users need to know or preliminary tasks that users need to perform before starting the current task.

### Rendering expectations

Implementations might want to consider having their stylesheets render a label for this element.

Processors might render prerequisite links from the related-links section together with the content of the `<prereq>` element.

### Specialization hierarchy

The `<prereq>` element is specialized from `<section>`. It is defined in the task module.

## Attributes

The following attributes are available on this element: [universal attributes \(36\)](#).

## Example

The following code sample is from a topic that explains how to create an SQLJ file. A prerequisite is to log into the SQLJ server.

```
<task id="sqlj">
  <title>Creating an SQLJ file</title>
  <taskbody>
    <prereq>Before creating a new SQLJ file, you must
    log in to the SQLJ server.
    </prereq>
    <!-- ... -->
  </taskbody>
</task>
```

Style sheets might generate a label, for example, “Before you begin”, to indicate clearly that the prerequisite task needs to be performed before embarking on the procedure.

## 2.15 <result>

The <result> element describes the expected outcome for the task as a whole.

## Rendering expectations

Implementations might want to consider having their stylesheets render a label for this element.

## Specialization hierarchy

The <result> element is specialized from <section>. It is defined in the task module.

## Attributes

The following attributes are available on this element: [universal attributes \(36\)](#).

## Example

In the following code sample, the author clearly communicates the expected result of successfully completing the task:

```
<task id="sqlj">
  <title>Creating an SQLJ file</title>
  <taskbody>
    <!-- ... -->
    <result>The <wintitle>File Created<wintitle> window is displayed, and the SQLJ
    file is successfully created.
    </result>
  </taskbody>
</task>
```

## 2.16 <step>

A step is an action that **users** take to complete a task. It can also contain additional information about the step, such as an example, result, or troubleshooting guidance.

### Rendering expectations

When the `@importance` attribute is specified on the `<step>` element, it indicates whether the step is optional or required. Implementations might want to consider having their stylesheets render a applicable label when `@importance` is specified on `<step>`,

### Specialization hierarchy

The `<step>` element is specialized from `<li>`. It is defined in the task module.

### Attributes

The following attributes are available on this element: [universal attributes](#) (36).

For this element, the `@importance` attribute is limited to the values "optional", "required", or [-dita-use-conref-target](#) (53).

### Example

The following code sample shows **many of** the elements that the `<step>` element can contain:

```
<step>
  <cmd>Specify the configuration parameters.</cmd>
  <info>The configuration parameters can be specified from either the command line or
    the product GUI.</info>
  <choices>
    <choice>From a command prompt, type config -l parameter</choice>
    <choice>Click New Configuration Parameters</choice>
  </choices>
  <stepresult>You receive a 'Configuration successful' message.</stepresult>
  <steptroubleshooting>If you do not receive a 'Configuration successful message,'
    retry the configuration operation.</steptroubleshooting>
</step>
```

## 2.17 <stepresult>

The `<stepresult>` element provides information about the expected outcome of a step.

### Specialization hierarchy

The `<stepresult>` element is specialized from `<div>`. It is defined in the task module.

### Attributes

The following attributes are available on this element: [universal attributes](#) (36).

### Example

In the following example, the content of the `<stepresult>` element enables the user to ascertain whether they have completed the step correctly:

```
<step>
  <cmd>Specify the configuration parameters.</cmd>
```

```

<info>You can use either the command line or the product GUI.</info>
<choices>
  <choice>From a command prompt, type <codeph>config -l parameter</codeph></choice>
  <choice>Click <uicontrol>New Configuration Parameters</uicontrol></choice>
</choices>
<stepresult>You receive a <systemoutput>'Configuration successful'</systemoutput> message.
</stepresult>
</step>

```

## 2.18 <steps>

Steps are a series of actions that **users perform** in a specific order and manner.

### Rendering expectations

Implementations might want to consider having their stylesheets render a label for this element.

### Specialization hierarchy

The <steps> element is specialized from <ol>. It is defined in the task module.

### Attributes

The following attributes are available on this element: [universal attributes](#) (36).

### Example

The following code sample shows a simple task topic with two steps:

```

<task id="sqlj">
<title>Creating an SQLJ file</title>
<taskbody>
  <context>Once you have set up SQLJ, you can create a new SQLJ file.</context>
  <steps>
    <step>
      <cmd>In a text editor, create a new file.</cmd>
    </step>
    <step>
      <cmd>Enter the first query statement.</cmd>
    </step>
  </steps>
</taskbody>
</task>

```

## 2.19 <steps-informal>

**Informal steps are steps that** do not follow a strict content model. A paragraph might describe more than one step, or a paragraph might combine procedural information along with other information.

### Rendering expectations

Implementations might want to consider having their stylesheets render a label for this element.

### Specialization hierarchy

The <steps-informal> element is specialized from <section>. It is defined in the task module.

### Attributes

The following attributes are available on this element: [universal attributes](#) (36).

## Example

The following code sample shows how an author provided informal information about how to grow a flower from seed:

```
<task id="growing-flower">
  <title>Growing a flower from seed</title>
  <taskbody>
    <steps-informal>
      <p>Put the soil in the container any old way. It doesn't really
        matter how you do it as long as it is at least 12 cm deep. Once
        the soil is in place, plant the seeds, water appropriately and
        wait.</p>
    </steps-informal>
  </taskbody>
</task>
```

## 2.20 <stepsection>

The <stepsection> element contains expository text that might be rendered before a step.

### Usage information

The <stepsection> element can be used to break up lengthy procedures by providing labels for groups of steps. Note that introducing <stepsection> elements will not affect the contiguous numbering of the steps.

### Rendering expectations

001 (22) | Processors which render the content of <stepsection> elements among the <step> elements **MUST NOT** number the <stepsection> elements. |

### Specialization hierarchy

The <stepsection> element is specialized from <li>. It is defined in the task module.

### Attributes

The following attributes are available on this element: [universal attributes](#) (36).

## Example

The following code sample shows how <stepsection> element can be used to group steps in a high-level overview topic that links to other topics:

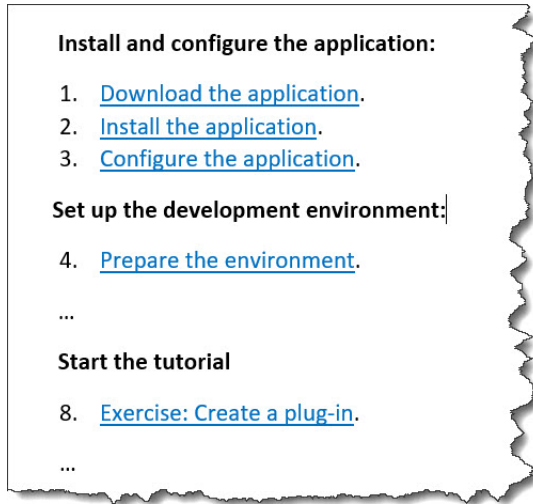
```
<steps>
  <stepsection>Install and configure the application:</stepsection>
  <step>
    <cmd><xref keyref="download">Download the application</xref>.</cmd>
  </step>
  <step>
    <cmd><xref keyref="install">Install the application</xref>.</cmd>
  </step>
  <step>
    <cmd><xref keyref="configure">Configure the application</xref></cmd>
  </step>
  <stepsection>Set up the development environment:</stepsection>
  <step>
    <cmd><xref keyref="prep">Prepare the environment</xref>.</cmd>
  </step>
  <!-- ... -->
```

```

<stepsection>Start the tutorial:</stepsection>
<step>
  <cmd><xref keyref="create-plugin">Exercise: Create a plug-in</xref>.</cmd>
</step>
<!-- ... -->
</steps>

```

This topic might be rendered in the following way. Note that the numbering of the steps is not affected by the introduction of the `<stepsection>` elements.



## 2.21 <steptroubleshooting>

**Step troubleshooting** is information that is **intended** to help **users respond** to the situation **if** a step does not complete as expected.

### Specialization hierarchy

The `<steptroubleshooting>` element is specialized from `<div>`. It is defined in the task module.

### Attributes

The following attributes are available on this element: [universal attributes](#) (36).

### Example

The following code sample shows how the `<steptroubleshooting>` element specifies the troubleshooting actions that a user can take if the step does not complete as they expected:

```

<step>
  <cmd>Log in to the system</cmd>
  <stepresult>
    <p>The <wintitle>Welcome</wintitle> screen appears.</p>
  </stepresult>
  <steptroubleshooting>
    <p>If the <wintitle>Welcome</wintitle> screen does not appear, try one or more of the following actions:</p>
    <ul>
      <li>Verify that the user name was entered correctly</li>
      <li>Verify that the password was entered correctly</li>
      <li>Confirm that the maintenance contract is still active</li>
    </ul>
  </steptroubleshooting>
</step>

```



```
</steptroubleshooting>  
</step>
```

## 2.22 <steps-unordered>

Unordered steps are steps in which the order of the steps to be performed might vary from one situation to another.

### Rendering expectations

Implementations might want to consider having their stylesheets render a label for this element.

### Specialization hierarchy

The <steps-unordered> element is specialized from <ul>. It is defined in the task module.

### Attributes

The following attributes are available on this element: [universal attributes](#) (36).

### Example

The following code sample shows how an author provided information about the tasks that need to be performed before leaving on a vacation. While each step involves a single item, the steps can be performed in any order.

```
<task id="prep-for-trip">  
  <title>Preparing for a trip</title>  
  <taskbody>  
    <steps-unordered>  
      <step>  
        <cmd>Arrange for a pet sitter</cmd>  
      </step>  
      <step>  
        <cmd>Do laundry</cmd>  
      </step>  
      <step>  
        <cmd>Buy a plane ticket</cmd>  
      </step>  
    </steps-unordered>  
  </taskbody>  
</task>
```

## 2.23 <stepxmp>

A **step example** illustrates how a step is completed. The example **might be text-based, an image, a code sample, a link to a video, or some other representation.**

### Specialization hierarchy

The <stepxmp> element is specialized from <div>. It is defined in the task module.

### Attributes

The following attributes are available on this element: [universal attributes](#) (36).

## Example

The following code sample shows how the `<stepxmp>` can provide an example of how a user can perform a step:

```
<step>
  <cmd>Add an XML comment in the map that explains why you applied the
    filtering attribute.</cmd>
  <stepxmp><p>For example:<p>
    <codeblock>
      <!-- 18 Dec 2019 ML: The following topic is under review and should
        not be published externally. [DH-1441]. -->
    </codeblock>
  </stepxmp>
</step>
```

## 2.24 <task>

The `<task>` element is the top-level element for a task topic. Task topics provide **the** instructions that **guide users** to perform a task.

### Usage information

The OASIS DITA Technical Committee distributes two document-type shells for task topics: general task and strict task.

#### General task

Has a more relaxed content model. It allows `<section>` and `<steps-informal>` inside of the task body; it also allows multiple instances and varying order for the elements that make up the task body.

#### (Strict) task

Maintains a strict order and cardinality for elements within the `<taskbody>` content model. The strict task is implemented with a constraint module.

### Specialization hierarchy

The `<task>` element is specialized from `<topic>`. It is defined in the task module.

### Attributes

The following attributes are available on this element: [universal attributes \(36\)](#) and [architectural attributes \(41\)](#).

For this element, the `@id` attribute is required.

## Example

The following code sample shows that `<task>` is the topic-level element for a task topic:

```
<task id="learn-dita">
  <title>Learning DITA</title>
  <!-- ... -->
</task>
```

## 2.25 <taskbody>

The <taskbody> element contains the body of a task topic. The task body can include prerequisites, contextual information, steps, results, examples, troubleshooting information, and post-requisites. General task topics can also contain generic sections.

### Usage information

The content model for the task topic varies depending on whether the strict task or general task document-type shell is used.

### Specialization hierarchy

The <taskbody> element is specialized from <body>. It is defined in the task module.

### Attributes

The following attributes are available on this element: [universal attributes \(36\)](#).

### Examples

This section contains examples of the <taskbody> element in both (strict) task and general task topics.

#### Figure 3: Strict task topic

The following code sample shows how the <taskbody> element contains the main building blocks of a strict task topic:

```
<task id="Generating-stub-files" xml:lang="en-us">
  <title>Generating stub files</title>
  <shortdesc>You can use Task Modeler to generate stub files. Stub files are DITA files
    that contain only a title.</shortdesc>
  <taskbody>
    <prereq>You must have created a DITA map in Task Modeler.</prereq>
    <context>As you perform this procedure, you can select the conventions that you want to
      use for file names.</context>
    <steps>
      <!-- ... -->
    </steps>
    <result>In the File Manager view, you can see the file names and paths of the DITA
      topics.</result>
    <tasktroubleshooting>If you cannot see the file name and paths of the DITA topics, refresh
      the view.</tasktroubleshooting>
    <example><!-- ... --></example>
    <postreq>You now can create a relationship table to define links between the topics in
      your DITA map.</postreq>
  </taskbody>
</task>
```

In a strict task topic, while the child elements of <taskbody> are all optional, they can only occur once and must appear in a specific order.

#### Figure 4: General task topic

The following code sample shows ...

#### Figure 5: General task topic used for reuse

The following code sample shows the content of a general task topic that is used to store <prereq> elements that are reused. While the implementation uses the strict task topic for their product

documentation, using a general task topic for a reuse topic enables them to have multiple `<prereq>` elements in a single topic

```
<task id="reuse-prereq">
  <title>Reuse topic: <xmlelement>prereq</xmlelement></title>
  <shortdesc>This topic stores <xmlelement>prereq</xmlelement> elements
    that are reused in the product documentation.</shortdesc>
  <taskbody>
    <!-- ... -->
    <prereq id="sp-10">Service Pack 10 must be installed.</prereq>
    <prereq id="admin-access">You must have administrator access in order
      to perform this procedure.</prereq>
    <!-- ... -->
  </taskbody>
</task>
```

## 2.26 <tasktroubleshooting>

Task troubleshooting information is information that is **intended** to help users **respond to** the situation if a task does not complete as expected.

### Usage information

In particular, the `<tasktroubleshooting>` element can be used to explain how users can recover when the results of a task do not match those listed in the `<result>` element. The troubleshooting remedy typically contains one or more actions for solving a problem. For complex remedies, link to another task.

### Rendering expectations

Implementations might want to consider having their stylesheets render a label for this element.

### Specialization hierarchy

The `<tasktroubleshooting>` element is specialized from `<section>`. It is defined in the task module.

### Attributes

The following attributes are available on this element: [universal attributes](#) (36).

### Example

In the following code sample, the `<tasktroubleshooting>` element contains brief information that explains the steps that the user can take when the results of a task are not as expected. For a complex remedy, the author could provide a link to another task topic.

```
<task id="add-new-categories">
  <title>Adding new user categories</title>
  <taskbody>
    <steps>
      <!-- ... -->
    </steps>
    <result>
      <p>The User Type menu displays the new types you added.</p>
    </result>
    <tasktroubleshooting>
      <p>If the User Type menu does not display the additions, try
        one or more of the following:
        <ul>
          <li>Refresh the page</li>
```

```
    <li>Verify that Add Types window is not still open; if so,  
    go to it and press <uicontrol>OK</uicontrol>.</li>  
  </ul>  
</p>  
</tasktroubleshooting>  
</taskbody>
```

## 2.27 <tutorialinfo>

The <tutorialinfo> element contains additional information that is useful when the task topic is part of a tutorial.

### Specialization hierarchy

The <tutorialinfo> element is specialized from <div>. It is defined in the task module.

### Attributes

The following attributes are available on this element: [universal attributes \(36\)](#).

### Example

The following code sample shows how the <tutorialinfo> element might be used in a task topic that is part of a tutorial.

```
<steps>  
  <step>  
    <cmd>Do this</cmd>  
    <tutorialinfo>In your editor, open the first element and click on  
    the dialog.</tutorialinfo>  
  </step>  
  <step>  
    <cmd>Do that</cmd>  
    <tutorialinfo>Move the framulator into the foobar box.</tutorialinfo>  
  </step>  
</steps>
```

---

## A Aggregated RFC-2119 statements

This appendix contains all the normative statements from the DITA for Technical Content 2.0 specification. They are aggregated here for convenience in this non-normative appendix.

Item	Conformance statement
001 (15)	Processors which render the content of <stepsection> elements among the <step> elements <b>MUST NOT</b> number the <stepsection> elements.

---

## B Attributes

This section contains definitions for commonly-used attributes. If an attribute is defined differently on a specific element, that information is covered in the topic for the specific element.

### Comment by Kristen J Eberlein on 29 December 2021

Add a brief overview of the fact that some specific attributes are overloaded – and have different meanings depending on what element they are specified upon.

**Disposition: Unassigned**

### B.1 Attribute groups

Many of the attributes used on DITA elements are defined in attribute groups. These attribute groups are used both in the grammar files and the specification,

#### Architectural attributes

This group contains a set of attributes that are defined for document-level elements such as `<topic>` and `<map>`.

##### **@DITAArchVersion (architectural attributes)**

Specifies the version of the DITA architecture that is in use. This attribute is in the namespace `http://dita.oasis-open.org/architecture/2005/`. This attribute is specified in the topic and map modules, and it uses a default value of the current version of DITA. The current default is "2.0".

##### **@specializations (architectural attributes)**

Specifies the attribute-domain specializations that are included in the document-type shell. This attribute is set as a default within the document-type shell. The value varies depending on what domains are integrated into the document-type shell. For example, a grammar file that includes the specialized attributes `@audience`, `@deliveryTarget`, and `@newBaseAtt` would set the value to `@props/audience @props/deliveryTarget @base/newBaseAtt`.

##### **@xmlns:ditaarch (architectural attributes)**

Declares the default DITA namespace. This namespace is declared as such in the RNG modules for `<topic>` and `<map>`, but it is specified as an attribute in the equivalent DTD-based modules. The value is fixed to `"http://dita.oasis-open.org/architecture/2005/"`.

#### Common map attributes

This group contains attributes that are frequently used on map elements.

### Comment by Kristen J Eberlein on 28 September 2022

I've added draft comments to the attribute definitions in this section that explain how the attribute is defined in the "DITA map attributes" topic.

**Disposition: Unassigned**

##### **@cascade (common map attributes)**

Specifies how metadata attributes cascade within a map. The specification defines the following values:

### **merge**

Indicates that the metadata attributes cascade, and that the values of the metadata attributes are additive. This is the processing default for the `@cascade` attribute.

### **nomerge**

Indicates that the metadata attributes cascade, but that they are not additive for `<topicref>` elements that specify a different value for a specific metadata attribute. If the cascading value for an attribute is already merged based on multiple ancestor elements, that merged value continues to cascade until a new value is encountered. That is, setting `cascade="nomerge"` does not undo merging that took place on ancestor elements.

Processors can also define custom, implementation-specific tokens for this attribute.

See [Cascading of metadata attributes in a DITA map](#) for more information about how this attribute interacts with metadata attributes.

### **@chunk (common map attributes)**

Specifies how a processor should render a map or branch of a map. For example, it can be used to specify that individual topic documents should be rendered as a single document, or that a single document with multiple topics should be rendered as multiple documents.

The following values are valid:

#### **combine**

Instructs a processor to combine the referenced source documents for rendering purposes. This is intended for cases where a publishing process normally results in a single output artifact for each source XML document.

#### **split**

Instructs a processor to split each topic from the referenced source document into its own document for rendering purposes. This is intended for cases where a publishing process normally results in a single output artifact for each source XML document, regardless of how many DITA topics exist within each source document.

Processors can also define custom, implementation-specific tokens for this attribute.

For a detailed description of the `@chunk` attribute and its usage, see [Chunking](#).

### **@collection-type (common map attributes)**

Specifies how topics or links relate to each other. The processing default is "unordered", although no default is specified in the OASIS-provided grammar files. The following values are valid:

#### **unordered**

Indicates that the order of the child topics is not significant.

#### **sequence**

Indicates that the order of the child topics is significant. Output processors will typically link between them in order.

#### **choice**

Indicates that one of the children should be selected.

#### **family**

Indicates a tight grouping in which each of the referenced topics not only relates to the current topic but also relate to each other.

**Comment by Kristen J Eberlein on 28 September 2022**

Here is the content from the "DITA map attributes" topic:



**@collection-type**

The @collection-type attribute specifies how the children of a <topicref> element relate to their parent and to each other. This attribute, which is set on the parent element, typically is used by processors to determine how to generate navigation links in the rendered topics. For example, a @collection-type value of "sequence" indicates that children of the specifying <topicref> element represent an ordered sequence of topics; processors might add numbers to the list of child topics or generate next/previous links for online presentation. This attribute is available in topics or the <linklist> and <linkpool> elements, where it has the same behavior. Where the @collection-type attribute is available on elements that cannot directly contain elements, the behavior of the attribute is undefined.

**Disposition: Unassigned**

**Comment by Kristen J Eberlein on 28 September 2022**

In the definitions of the supported values, do we want to refer to "resources" instead of "topics"? Since we specify that @collection-type specifies "how topics **or** links relate to each other" ...

**Disposition: Unassigned**

**@keyscope (common map attributes)**

Specifies that the element marks the boundaries of a key scope.

See [B.4 STUB CONTENT](#) (53) for information on using this attribute.

**Comment by Kristen J Eberlein on 28 September 2022**

Here is the content from the "DITA map attributes" topic:

**@keyscope**

Defines a new scope for key definition and resolution, and gives the scope one or more names. For more information about key scopes, see [Indirect key-based addressing](#).

**Disposition: Unassigned**

**@linking (common map attributes)**

Specifies linking characteristics of a topic specific to the location of this reference in a map. If the value is not specified locally, the value might cascade from another element in the map (for cascade rules, see [Cascading of metadata attributes in a DITA map](#)).

**Comment by robander on Dec 28 2021**

The text below matches [1.3 spec text](#) but I'm nervous about "cannot link" type definition. It's describing how to generate links based on the current context in the map - it's not describing what the topic itself is allowed to link to, which is how I interpret "can".

**Disposition: Unassigned**

The following values are valid:

**targetonly**

A topic can only be linked to and cannot link to other topics.

**sourceonly**

A topic cannot be linked to but can link to other topics.

**normal**

A topic can be linked to and can link to other topics. Use this to override the linking value of a parent topic.

**none**

A topic cannot be linked to or link to other topics.

**-dita-use-conref-target**

See [Using the -dita-use-conref-target value](#) for more information.

**Comment by Kristen J Eberlein on 28 September 2022**

Here is the content from the "DITA map attributes" topic:

**@linking**

By default, the relationships between the topics that are referenced in a map are reciprocal:

- Child topics link to parent topics and vice versa.
- Next and previous topics in a sequence link to each other.
- Topics in a family link to their sibling topics.
- Topics referenced in the table cells of the same row in a relationship table link to each other. A topic referenced within a table cell does not (by default) link to other topics referenced in the same table cell.

This behavior can be modified by using the `@linking` attribute, which enables an author or information architect to specify how a topic participates in a relationship. The following values are valid:

**linking="none"**

Specifies that the topic does not exist in the map for the purposes of calculating links.

**linking="sourceonly"**

Specifies that the topic will link to its related topics but not vice versa.

**linking="targetonly"**

Specifies that the related topics will link to it but not vice versa.

**linking="normal"**

Default value. It specifies that linking will be reciprocal (the topic will link to related topics, and they will link back to it).

Authors also can create links directly in a topic by using the `<xref>` or `<link>` elements, but in most cases map-based linking is preferable, because links in topics create dependencies between topics that can hinder reuse.

Note that while the relationships between the topics that are referenced in a map are reciprocal, the relationships merely *imply* reciprocal links in generated output that includes links. The rendered navigation links are a function of the presentation style that is determined by the processor.

**Disposition: Unassigned****@processing-role (common map attributes)**

Specifies whether the referenced resource is processed normally or treated as a resource that is only included in order to resolve references, such as key or content references. The following values are valid:

**normal**

Indicates that the resource is a readable part of the information set. It is included in navigation and search results. This is the default value for the `<topicref>` element.

**resource-only**

Indicates that the resource should be used only for processing purposes. It is not included in navigation or search results, nor is it rendered as a topic. This is the default value for the `<keydef>` element.

**-dita-use-conref-target**

See [Using the -dita-use-conref-target value](#) for more information.

If no value is specified but the attribute is specified on a containing element within a map or within the related-links section, the value cascades from the closest containing element.

**@search (common map attributes)**

Specifies whether the target is available for searching. If the value is not specified locally, the value might cascade from another element in the map (for cascade rules, see [Cascading of metadata attributes in a DITA map](#)). The following values are valid: "yes", "no", and "-dita-use-conref-target".

**Comment by Kristen J Eberlein on 28 September 2022**

Here is the content from the "DITA map attributes" topic:

**@search**

Specifies whether the topic is included in search indexes.

**Disposition: Unassigned**

**@subjectrefs (common map attributes)**

Specifies one or more keys that are each defined by a subject definition in a subject scheme map. Multiple values are separated by white space.

**@toc (common map attributes)**

Specifies whether a topic appears in the table of contents (TOC) based on the current map context. If the value is not specified locally, the value might cascade from another element in the map (for cascade rules, see [Cascading of metadata attributes in a DITA map](#)). The following values are valid:

**yes**

The topic appears in a generated TOC.

**no**

The topic does not appear in a generated TOC.

**-dita-use-conref-target**

See [B.4 STUB CONTENT](#) (53) for more information.

**Comment by Kristen J Eberlein on 28 September 2022**

Here is the content from the "DITA map attributes" topic:

**@toc**

Specifies whether topics are excluded from navigation output, such as a Web site map or an online table of contents. By default, `<topicref>` hierarchies are included in navigation output; relationship tables are excluded.

**Disposition: Unassigned**

## Complex table attributes

This group includes attributes that are defined on complex table elements. Unless other noted, these attributes are part of the OASIS Exchange Table Model. Complex table elements typically use only a subset of the attributes that are defined in this group.

### **@align (complex table attributes)**

Specifies the **horizontal** alignment of text in table **entries**. The following values are valid:

#### **left**

Indicates left alignment of the text.

#### **right**

Indicates right alignment of the text.

#### **center**

Indicates center alignment of the text.

#### **justify**

Justifies the contents to both the left and the right.

#### **char**

Indicates character alignment. The text is aligned with the first occurrence of the character specified by the @char attribute.

#### **-dita-use-conref-target**

See [Using the -dita-use-conref-target value](#) for more information.

The @align attribute is available on the following table elements: <colspec>, <entry>, and <tgroup>.

### **@char (complex table attributes)**

Specifies the alignment character, which is the character that is used for aligning the text in table entries. This attribute applies when align="char". A value of "" (the null string) means there is no aligning character.

For example, if align="char" and char="." are specified, then text in the table entry aligns with the first occurrence of the period within the entry. This might be useful if decimal alignment is required.

The @char attribute is available on the following table elements: <colspec> and <entry>.

### **@charoff (complex table attributes)**

Specifies the horizontal offset of the alignment character **that is specified by the @char attribute**. The value is a greater-than-zero number that is less than or equal to 100. It represents the percentage of the current column width by which the text is offset to the left of the alignment character.

For example, if align="char", char=".", and charoff="50" are all specified, then text in the table entry is aligned 50% of the distance to the left of the first occurrence of the period character within the table entry.

The @charoff attribute is available on the following table elements: <colspec> and <entry>.

### **@colsep (complex table attributes)**

Specifies whether to render column separators between table entries. The following values are valid: "0" (no separators) and "1" (separators).

The @colsep attribute is available on the following table elements: <colspec>, <entry>, <table>, and <tgroup>.

### **@rowheader (complex table attributes)**

Specifies whether the entries in the respective column are row headers. The following values are valid:

#### **firstcol**

Indicates that entries in the first column of the table are row headers. This applies when the `@rowheader` attribute is specified on the `<table>` element.

#### **headers**

Indicates that entries of the column that is described using the `<colspec>` element are row headers. This applies when the `@rowheader` attribute is specified on the `<colspec>` element.

#### **norowheader**

Indicates that entries in the first column are not row headers. This applies when the `@rowheader` attribute is specified on the `<table>` element.

#### **-dita-use-conref-target**

See [Using the -dita-use-conref-target value](#) for more information.

**Note** This attribute is not part of the OASIS Exchange Table Model upon which DITA tables are based. Some processors or output formats might not support all values.

The `@rowheader` attribute is available on the following table elements: `<table>` and `<colspec>`.

### **@rowsep (complex table attributes)**

Specifies whether to render row separators between table entries. The following values are valid: "0" (no separators) and "1" (separators).

The `@rowsep` attribute is available on the following table elements: `<colspec>`, `<entry>`, `<row>`, `<table>`, and `<tgroup>`.

### **@valign (complex table attributes)**

Specifies the vertical alignment of text in table **entries**. The following values are valid:

#### **bottom**

Indicates that text is aligned with the bottom of the table entry.

#### **middle**

Indicates that text is aligned with the middle of the table entry.

#### **top**

Indicates that text is aligned with the top of the table entry.

#### **-dita-use-conref-target**

See [Using the -dita-use-conref-target value](#) for more information.

The `@valign` attribute is available on the following table elements: `<entry>`, `<tbody>`, `<thead>`, and `<row>`.

## **Data-element attributes**

This group contains attributes that are defined on the `<data>` element and its specializations.

### **@datatype (data-element attributes)**

Specifies the type of data contained in the `@value` attribute or within the `<data>` element. A typical use of `@datatype` will be the identifying URI for an XML Schema datatype.

### **@name (data-element attributes)**

Defines a unique name for the object.

**Comment by robander**

Do we need to specify the scope of "unique" here?

**Disposition: Unassigned**

### **@value (data-element attributes)**

Specifies a value associated with the current property or element.

## Date attributes

This group contains attributes that take date values. They are defined on metadata elements that work with date information:

### **@expiry (date attributes)**

Specifies the date when the information should be retired or refreshed. The date is specified using the ISO 8601 format: *YYYY-MM-DD*, where *YYYY* is the year, *MM* is the month (01 to 12), and *DD* is the day (01-31).

### **@golive (date attributes)**

Specifies the publication or general availability (GA) date. The date is specified using the ISO 8601 format: *YYYY-MM-DD*, where *YYYY* is the year, *MM* is the month (01 to 12), and *DD* is the day (01-31).

## Display attributes

This group contains attributes that affect the rendering of many elements.

### **@expansion (display attributes)**

Specifies the horizontal placement of the element. The following values are valid:

#### **column**

Indicates that the element is aligned with the current column margin.

#### **page**

Indicates that the element is placed on the left page margin for left-to-right presentation or the right page margin for right-to-left presentation.

#### **spread**

Indicates that the object is rendered across a multi-page spread. If the output format does not have anything that corresponds to spreads, then "spread" has the same meaning as "page".

#### **textline**

**Indicates** that the element is aligned with the left (for left-to-right presentation) or right (for right-to-left presentation) margin of the current text line and takes indentation into account.

#### **-dita-use-conref-target**

See [Using the -dita-use-conref-target value](#) for more information.

For `<table>`, in place of the `@expansion` attribute that is used by other DITA elements, the `@pgwide` attribute is used in order to conform to the OASIS Exchange Table Model.

Some processors or output formats might not support all values.

### **@frame (display attributes)**

Specifies which portion of a border surrounds the element. The following values are valid:

#### **all**

Indicates that a line is rendered at the top, bottom, left, and right of the containing element.

#### **bottom**

Indicates that a line is rendered at the bottom of the containing element.

**none**

Indicates that no lines are rendered.

**sides**

Indicates that a line is rendered at the left and right of the containing element.

**top**

Indicates that a line is rendered at the top of the containing element.

**topbot**

Indicates that a line is rendered at the top and bottom of the containing element.

**-dita-use-conref-target**

See [Using the -dita-use-conref-target value](#) for more information.

Some processors or output formats might not support all values.

**@scale (display attributes)**

Specifies the percentage by which fonts are resized in relation to the normal text size. The value of this attribute is a positive integer. When used on `<table>` or `<simpletable>`, the following values are valid: "50", "60", "70", "80", "90", "100", "110", "120", "140", "160", "180", "200", and [-dita-use-conref-target](#) (53).

This attribute is primarily useful for print-oriented display. Some processors might not support all values.

If the `@scale` attribute is specified on an element that contains an image, the image is not scaled. The image is scaled **only** if a scaling property is explicitly specified for the `<image>` element.

## ID and conref attributes

This group contains the attributes that enable the naming and referencing of elements.

**@conaction**

Specifies how the element content will be pushed into a new location. The following values are valid:

**mark**

The element acts as a marker when pushing content before or after the target, to help ensure that the push action is valid. The element with `conaction="mark"` also specifies the target of the push action with `@conref`. Content inside of the element with `conaction="mark"` is not pushed to the new location.

**pushafter**

Content from this element is pushed after the location specified by `@conref` on the element with `conaction="mark"`. The element with `conaction="pushafter"` is the first sibling element after the element with `conaction="mark"`.

**pushbefore**

Content from this element is pushed before the location specified by `@conref` on the element with `conaction="mark"`. The element with `conaction="pushbefore"` is the first sibling element before the element with `conaction="mark"`.

**pushreplace**

Content from this element replaces any content from the element referenced by the `@conref` attribute. A second element with `conaction="mark"` is not used when using `conaction="pushreplace"`.

**-dita-use-conref-target**

See [Using the -dita-use-conref-target value](#) for more information.

See [B.4 STUB CONTENT](#) (53) for examples and details about the syntax.

#### **@conkeyref**

Specifies a key name or a key name with an element ID that acts as an indirect reference to reusable content. The referenced content is used in place of the content of the current element. See [B.4 STUB CONTENT](#) (53) for more details about the syntax and behaviors.

#### **@conref**

Specifies a URI that references a DITA element. The referenced content is used in place of the content of the current element. See [B.4 STUB CONTENT](#) (53) for examples and details about the syntax.

#### **@conrefend**

Specifies a URI that references the last element in a sequence of elements, with the first element of the sequence specified by `@conref`. The referenced sequence of elements is used in place of the content of the current element. See [B.4 STUB CONTENT](#) (53) for examples and details about the syntax.

#### **@id**

Specifies an identifier for the current element. This ID is the target for references by `@href` and `@conref` attributes and for external applications that refer to DITA or LwDITA content. This attribute is defined with the XML data type NMTOKEN, except where noted for specific elements within the language reference.

See [id attribute](#) for more details.

### **Inclusion attributes**

This group includes attributes defined on `<include>` and its specializations:

#### **Comment by Kristen J Eberlein on 28 September 2002**

What is specialized from `<include>`? Both base (if any) and technical content ...

**Disposition: Unassigned**

#### **@encoding (inclusion attributes)**

#### **Comment by Kristen J Eberlein on 29 April 2019**

Can we replace "should" in the following definition?

**Disposition: Unassigned**

Specifies the character encoding to use when translating the character data from the referenced content. The value should be a valid encoding name. If not specified, processors may make attempts to automatically determine the correct encoding, for example using HTTP headers, through analysis of the binary structure of the referenced data, or the `<?xml?>` processing instruction when including XML as text. The resource should be treated as UTF-8 if no other encoding information can be determined.

When `parse="xml"`, standard XML parsing rules apply for the detection of character encoding. The necessity and uses of `@encoding` for non-standard values of `@parse` are implementation-dependent.

#### **@parse (inclusion attributes)**

Specifies the processing expectations for the referenced resource. Processors must support the following values:



## text

The contents should be treated as plain text. Reserved XML characters should be displayed, and not interpreted as XML markup.

## xml

The contents of the referenced resource should be treated as an XML document, and the referenced element should be inserted at the location of the `<include>` element. If a fragment identifier is included in the address of the content, processors must select the element with the specified ID. If no fragment identifier is included, the root element of the referenced XML document is selected. Any grammar processing should be performed during resolution, such that default attribute values are explicitly populated. Prolog content must be discarded.

It is an error to use `parse="xml"` anywhere other than within `<foreign>` or a specialization thereof.

Processors may support other values for the `@parse` attribute with proprietary processing semantics. Processors should issue warnings and use `<fallback>` when they encounter unsupported `@parse` values. Non-standard `@parse` instructions should be expressed as URIs.

**Note** Proprietary `@parse` values will likely limit the portability and interoperability of DITA content, so should be used with care.

## Link relationship attributes

This group contains attributes whose values can be used for representing navigational relationships.

### **@format (link-relationship attributes)**

Specifies the format of the resource that is referenced. See [B.4 STUB CONTENT \(53\)](#) for detailed information on supported values and processing implications.

### **@href (link-relationship attributes)**

Specifies a reference to a resource. See [B.4 STUB CONTENT \(53\)](#) for detailed information on supported values and processing implications.

### **@scope (link-relationship attributes)**

Specifies the closeness of the relationship between the current document and the referenced resource. The following values are valid: "local", "peer", "external", and "-dita-use-conref-target".

See [B.4 STUB CONTENT \(53\)](#) for detailed information on supported values and processing implications.

### **@type (link-relationship attributes)**

Describes the target of a reference. See [B.4 STUB CONTENT \(53\)](#) for detailed information on supported values and processing implications.

## Localization attributes

### **Comment by Kristen J Eberlein on 29 September 2022**

The definition of the localizations attribute matches how they are described in the architectural topics. Wherever possible, the definition is reused. Where it is not reused (because the definition in the archSpec topics is in a shortdesc), I've checked to ensure that wording is identical.

**Disposition: Unassigned**

This group contains the attributes that are related to translation and localization.

## @dir

Identifies or overrides the text directionality. The following values are valid:

### lro

Indicates an override of the Unicode Bidirectional Algorithm, forcing the element into left-to-right mode.

### ltr

Indicates left-to-right.

### rlo

Indicates an override of the Unicode Bidirectional Algorithm, forcing the element into right-to-left mode.

### rtl

Indicates right-to-left.

### -dita-use-conref-target

See [Using the -dita-use-conref-target value](#) for more information.

See [The dir attribute](#) for more information.

## @translate

Specifies whether the content of the element should be translated. The following values are valid: "yes", "no", and "-dita-use-conref-target".

See [Element-by-element recommendations for translators](#) for suggested processing defaults for each element.

### Comment by Kristen J Eberlein on 31 December 2021

Does [Element-by-element recommendations for translators](#) really provide suggested processing defaults for each element? I thought it covered whether an element was block or in-line and whether there were considerations that translators needed to be aware of.

**Disposition: Unassigned**

## @xml:lang

Specifies the language and optional locale of the content that is contained in an element. Valid values are language tokens or the null string. The `@xml:lang` attribute and its values are described in the [Extensible Markup Language 1.0 specification, fifth edition](#).

### Comment by Kristen J Eberlein on 29 September 2022

Do we also want to direct readers to the architectural topics about the `@xml:lang` attribute?

**Disposition: Unassigned**

## Metadata attributes

This group contains common metadata attributes: `@base`, `@importance`, `@props`, `@rev`, and `@status`. The `@base` and `@props` attributes can be specialized.

### @base

Specifies metadata about the element. It is often used as a base for specialized attributes that have a simple syntax for values, but which are not conditional processing attributes.

The @base attribute takes a space-delimited set of values. However, when serving as a container for generalized attributes, the attribute values will be more complex. See [Attribute generalization](#) for more details.

### @importance

Specifies the importance or priority that is assigned to an element. The following values are valid: "default", "deprecated", "high", "low", "normal", "obsolete", "optional", "recommended", "required", "urgent", and "-dita-use-conref-target". This attribute is not used for conditional processing, although applications might use the value of the @importance attribute to highlight elements. For example, in steps of a task topic, the value of the @importance attribute indicates whether a step is optional or required.

#### Comment by Kristen J Eberlein on 29 September 2022

I think the phrase "to highlight elements" is a little off. Maybe "render generated text"? And how about adding "Processors often add text or images to ensure that readers of the generated content understand whether the step is optional or required." to the end of the example?

**Disposition: Unassigned**

### @props

Specifies metadata about the element. New attributes can be specialized from the @props attribute. This attribute supports conditional processing. If no value is specified but the attribute is specified on a containing element within a map or within the related-links section, the value cascades from the closest containing element.

The @props attribute takes a space-delimited set of values. However, when serving as a container for generalized attributes, the attribute values will be more complex. See [Attribute generalization](#) for more details.

### @rev

Specifies a revision level of an element that identifies when the element was added or modified. It can be used to flag outputs when it matches a run-time parameter. It cannot be used for filtering nor is it sufficient to be used for version control. If no value is specified but the attribute is specified on a containing element within a map or within the related-links section, the value cascades from the closest containing element.

#### Comment by Kristen J Eberlein on 29 September 2022

I want to tweak this. How about the following? Also, neither definition describes what values are permitted.

Specifies metadata that identifies when the element was added or the content of the element was modified. The @rev attribute can be used for flagging. It cannot be used for filtering nor is it sufficient to be used for version control. If no value is specified but the attribute is specified on a containing element within a map or within the related-links section, the value cascades from the closest containing element.

**Disposition: Unassigned**

### @status

Specifies the modification status of the element. The following values are valid: "new", "changed", "deleted", "unchanged", and "-dita-use-conref-target".

## Simple table attributes

This group includes attributes that are defined only on the `<simpletable>` element: `@keycol` and `@relcolwidth`. These attributes are listed in a group because the `<simpletable>` element is frequently used as a specialization base.

### **@keycol (simpletable attributes)**

Specifies the column that contains the content that represents the key to the tabular structure. If `@keycol` is present and assigned a numerical value, the specified column is treated as a vertical header.

### **@relcolwidth (simpletable attributes)**

Specifies the width of each column in relationship to the width of the other columns. The value is a space-separated list of relative column widths. Each column width is specified as a positive integer or decimal number followed by an asterisk character.

For example, the value `relcolwidth="1* 2* 3*"` gives a total of 6 units across three columns. The relative widths are 1/6, 2/6, and 3/6 (16.7%, 33.3%, and 50%). Similarly, the value `relcolwidth="90* 150*"` causes relative widths of 90/240 and 150/240 (37.5% and 62.5%).

## Universal attributes

This group defines a set of attributes that are available on almost all DITA elements. It includes all elements in the ID, localization, and metadata attribute groups, as well as the following attributes:

### **@class (not for use by authors)**

*This attribute is not for use by authors. If an editor displays @class attribute values, do not edit them.* Specifies a default value that defines the specialization ancestry of the element. Its predefined values allow DITA tools to work correctly with specialized elements. In a generalized DITA document the `@class` attribute value in the generalized instance might differ from the default value for the `@class` attribute for the element as given in the DTD or schema. See [The class attribute rules and syntax](#) for more information. This attribute is specified on every element except for the `<dita>` container element. It is always specified with a default value, which varies for each element.

### **@outputclass**

Specifies a role that the element is playing. The role must be consistent with the basic semantic and expectations for the element. In particular, the `@outputclass` attribute can be used for styling during output processing; HTML output will typically preserve `@outputclass` for CSS processing.

#### **Comment by robander**

I don't like "The role must be consistent...", that seems like best practice that cannot be normative – and I could easily say `outputclass="flashy"` which makes my element show up with sparkles, and has nothing to do with "the basic semantic and expectations for the element".

**Disposition: Unassigned**

## B.2 Universal attribute group

The universal attribute group defines a set of common attributes that are available on almost every DITA element. The universal attribute group includes all attributes from the ID, localization, and metadata attribute groups, plus the `@class` and `@outputclass` attributes.

#### **Comment by Kristen J Eberlein on 29 December 2021**

This is something wrong with the organizational structure of this topic ... Look at it in outline form, and check that the sections, titles, and content all make logical sense with the topic title of "Universal attribute group".

**Disposition: Unassigned**

## Common attribute groups

The following attribute groups are referenced in this specification. They are also used in the grammar files when the element attributes are defined.

### Universal attributes

Includes `@class` and `@outputclass`, along with every attribute in the ID, localization, and metadata attribute groups.

### ID attributes

This group includes the attributes that enable the naming and referencing of elements: `@conaction`, `@conkeyref`, `@conref`, `@conrefend`, and `@id`.

### Localization attributes

This group includes attributes that are related to translation and localization: `@dir`, `@translate`, and `@xml:lang`.

### Metadata attributes

#### Comment by Kristen J Eberlein on 31 December 2021

Why do we need to mention that two attributes are available for specialization here? I think it makes the paragraph hard to read.

**Disposition: Unassigned**

This group includes common metadata attributes, two of which are available for specialization: `@base`, `@importance`, `@props`, `@rev`, and `@status`.

The base DITA vocabulary from OASIS includes several specializations of `@props`: `@audience`, `@deliveryTarget`, `@otherprops`, `@platform`, and `@product`. These attributes are defined as attribute-extension domains. By default, they are integrated into all OASIS-provided document-type shells, but they can be made unavailable by implementing custom document-type shells.

#### Comment by Kristen J Eberlein on 29 December 2021

Why do we provide information about specialization and custom document-type shells here? I think that information could be removed.

**Disposition: Unassigned**

## Universal attribute definitions

The universal attributes for OASIS DITA elements are defined below. Specialized attributes, which are part of the OASIS distribution but are only available when explicitly included in a shell, are noted in the list.

### **@audience** (*specialized attribute*)

Indicates the intended audience for the element. If no value is specified but the attribute is specified on a containing element within a map or within the related-links section, the value cascades from the closest containing element.

### **@base**

Specifies metadata about the element. It is often used as a base for specialized attributes that have a simple syntax for values, but which are not conditional processing attributes.

The `@base` attribute takes a space-delimited set of values. However, when serving as a container for generalized attributes, the attribute values will be more complex. See [Attribute generalization](#) for more details.

### **@class (not for use by authors)**

*This attribute is not for use by authors. If an editor displays @class attribute values, do not edit them.* Specifies a default value that defines the specialization ancestry of the element. Its predefined values allow DITA tools to work correctly with specialized elements. In a generalized DITA document the `@class` attribute value in the generalized instance might differ from the default value for the `@class` attribute for the element as given in the DTD or schema. See [The class attribute rules and syntax](#) for more information. This attribute is specified on every element except for the `<dita>` container element. It is always specified with a default value, which varies for each element.

### **@conaction**

Specifies how the element content will be pushed into a new location. The following values are valid:

#### **mark**

The element acts as a marker when pushing content before or after the target, to help ensure that the push action is valid. The element with `conaction="mark"` also specifies the target of the push action with `@conref`. Content inside of the element with `conaction="mark"` is not pushed to the new location.

#### **pushafter**

Content from this element is pushed after the location specified by `@conref` on the element with `conaction="mark"`. The element with `conaction="pushafter"` is the first sibling element after the element with `conaction="mark"`.

#### **pushbefore**

Content from this element is pushed before the location specified by `@conref` on the element with `conaction="mark"`. The element with `conaction="pushbefore"` is the first sibling element before the element with `conaction="mark"`.

#### **pushreplace**

Content from this element replaces any content from the element referenced by the `@conref` attribute. A second element with `conaction="mark"` is not used when using `conaction="pushreplace"`.

#### **-dita-use-conref-target**

See [Using the -dita-use-conref-target value](#) for more information.

See [B.4 STUB CONTENT](#) (53) for examples and details about the syntax.

### **@conkeyref**

Specifies a key name or a key name with an element ID that acts as an indirect reference to reusable content. The referenced content is used in place of the content of the current element. See [B.4 STUB CONTENT](#) (53) for more details about the syntax and behaviors.

### **@conref**

Specifies a URI that references a DITA element. The referenced content is used in place of the content of the current element. See [B.4 STUB CONTENT](#) (53) for examples and details about the syntax.

### **@conrefend**

Specifies a URI that references the last element in a sequence of elements, with the first element of the sequence specified by `@conref`. The referenced sequence of elements is used in place of the content of the current element. See [B.4 STUB CONTENT](#) (53) for examples and details about the syntax.

### **@deliveryTarget (specialized attribute)**

Specifies the intended delivery target of the content, for example, "html", "pdf", or "epub". If no value is specified but the attribute is specified on a containing element within a map or within the related-links section, the value cascades from the closest containing element.

### **@dir**

Identifies or overrides the text directionality. The following values are valid:

#### **lro**

Indicates an override of the Unicode Bidirectional Algorithm, forcing the element into left-to-right mode.

#### **ltr**

Indicates left-to-right.

#### **rlo**

Indicates an override of the Unicode Bidirectional Algorithm, forcing the element into right-to-left mode.

#### **rtl**

Indicates right-to-left.

#### **-dita-use-conref-target**

See [Using the -dita-use-conref-target value](#) for more information.

See [The dir attribute](#) for more information.

### **@id**

Specifies an identifier for the current element. This ID is the target for references by `@href` and `@conref` attributes and for external applications that refer to DITA or LwDITA content. This attribute is defined with the XML data type NMTOKEN, except where noted for specific elements within the language reference.

See [id attribute](#) for more details.

### **@importance**

Specifies the importance or priority that is assigned to an element. The following values are valid: "default", "deprecated", "high", "low", "normal", "obsolete", "optional", "recommended", "required", "urgent", and "-dita-use-conref-target". This attribute is not used for conditional processing, although applications might use the value of the `@importance` attribute to highlight elements. For example, in steps of a task topic, the value of the `@importance` attribute indicates whether a step is optional or required.

#### **Comment by Kristen J Eberlein on 29 September 2022**

I think the phrase "to highlight elements" is a little off. Maybe "render generated text"? And how about adding "Processors often add text or images to ensure that readers of the generated content understand whether the step is optional or required." to the end of the example?

**Disposition: Unassigned**

### **@otherprops (specialized attribute)**

Specifies a property or properties that provide selection criteria for the element. Alternatively, the `@props` attribute can be specialized to provide a new metadata attribute instead of using the general `@otherprops` attribute. If no value is specified but the attribute is specified on a containing element within a map or within the related-links section, the value cascades from the closest containing element.

### **@outputclass**

Specifies a role that the element is playing. The role must be consistent with the basic semantic and expectations for the element. In particular, the `@outputclass` attribute can be used for styling during output processing; HTML output will typically preserve `@outputclass` for CSS processing.

#### **Comment by robander**

I don't like "The role must be consistent...", that seems like best practice that cannot be normative – and I could easily say `outputclass="flashy"` which makes my element show up with sparkles, and has nothing to do with "the basic semantic and expectations for the element".

**Disposition: Unassigned**

### **@platform (specialized attribute)**

Indicates operating system and hardware. If no value is specified but the attribute is specified on a containing element within a map or within the related-links section, the value cascades from the closest containing element.

#### **Comment by robander**

I think this could specify a platform that is not an operating system or hardware, right? The current definition explicitly limits platform to those two ... maybe "Specifies a platform or platforms to which the element applies, such as the operating system or hardware relevant to a task."

**Disposition: Unassigned**

### **@product (specialized attribute)**

Specifies the name of the product to which the element applies. If no value is specified but the attribute is specified on a containing element within a map or within the related-links section, the value cascades from the closest containing element.

### **@props**

Specifies metadata about the element. New attributes can be specialized from the `@props` attribute. This attribute supports conditional processing. If no value is specified but the attribute is specified on a containing element within a map or within the related-links section, the value cascades from the closest containing element.

The `@props` attribute takes a space-delimited set of values. However, when serving as a container for generalized attributes, the attribute values will be more complex. See [Attribute generalization](#) for more details.

### **@rev**

Specifies a revision level of an element that identifies when the element was added or modified. It can be used to flag outputs when it matches a run-time parameter. It cannot be used for filtering nor is it sufficient to be used for version control. If no value is specified but the attribute is specified on a containing element within a map or within the related-links section, the value cascades from the closest containing element.

#### **Comment by Kristen J Eberlein on 29 September 2022**

I want to tweak this. How about the following? Also, neither definition describes what values are permitted.

Specifies metadata that identifies when the element was added or the content of the element was modified. The `@rev` attribute can be used for flagging. It cannot be used for filtering nor is it sufficient to be used for version control. If no value is specified but the attribute is specified on a containing element within a map or within the related-links section, the value cascades from the closest containing element.

**Disposition: Unassigned**



### **@status**

Specifies the modification status of the element. The following values are valid: "new", "changed", "deleted", "unchanged", and "-dita-use-conref-target".

### **@translate**

Specifies whether the content of the element should be translated. The following values are valid: "yes", "no", and "-dita-use-conref-target".

See [Element-by-element recommendations for translators](#) for suggested processing defaults for each element.

#### **Comment by Kristen J Eberlein on 31 December 2021**

Does [Element-by-element recommendations for translators](#) really provide suggested processing defaults for each element? I thought it covered whether an element was block or in-line and whether there were considerations that translators needed to be aware of.

**Disposition: Unassigned**

### **@xml:lang**

Specifies the language and optional locale of the content that is contained in an element. Valid values are language tokens or the null string. The `@xml:lang` attribute and its values are described in the [Extensible Markup Language 1.0 specification, fifth edition](#).

#### **Comment by Kristen J Eberlein on 29 September 2022**

Do we also want to direct readers to the architectural topics about the `@xml:lang` attribute?

**Disposition: Unassigned**

## **B.3 Common attributes**

The common attributes topic collects defines most of the attributes that are used on more than one base element.

### **Common attribute groups**

The following groups are referenced in this specification, and they are also used in grammar files when defining attributes for elements.

#### **Architectural attributes**

This group includes a set of attributes that are defined for document-level elements such as `<topic>` and `<map>`: `@DITAArchVersion`, `@specializations`, and `@xmlns:ditaarch`.

#### **Common map attributes**

This group includes attributes that are frequently used on map elements: `@cascade`, `@chunk`, `@collection-type`, `@keyscope`, `@linking`, `@processing-role`, `@search`, `@toc`, and `@subjectrefs`.

#### **Complex table attributes**

This group includes attributes that are defined on table elements but not simple table elements. These attributes are part of the OASIS Exchange Table Model, unless otherwise noted. Table elements generally use only a subset of the attributes that are defined in this group. This group contains the following attributes: `@align`, `@char`, `@charoff`, `@colsep`, `@rowheader`, `@rowsep`, and `@valign`.

### Data-element attributes

Includes attributes defined on `<data>` and its many specializations: `@datatype`, `@name`, and `@value`

### Date attributes

Includes attributes that take date values, and are defined on metadata elements that work with date information: `@expiry` and `@golive`

### Display attributes

This group includes attributes that affect the rendering of many elements: `@expand`, `@frame`, and `@scale`.

### Inclusion attributes

Includes attributes defined on `<include>` and its specializations: `@encoding` and `@parse`.

### Link-relationship attributes

This group includes attributes whose values can be used for representing navigational relationships: `@format`, `@href`, `@type`, and `@scope`.

### Simple table attributes

#### Comment by Kristen J Eberlein on 29 December 2021

If I have jumped to this place in a document from the element-reference topic, I want the attributes listed here in the "Simple table group" to be hyperlinked to the actual definition.

#### Disposition: Unassigned

This group includes attributes that are defined only on the `<simpletable>` element: `@keycol` and `@relcolwidth`. These attributes are listed in a group because the `<simpletable>` element is frequently used as a specialization base.

### Table accessibility attributes

This group contains attributes that are defined on the `<stentry>` element and its specializations: `@headers` (47) and `@scope (as defined on <stentry>)` (51).

### Other attributes (not in a group)

These are attributes that are used in the same way on more than one base element, but they are not formally grouped together: `@compact`, `@duplicates`, `@otherrole`, `@role`, and `@title-role`.

## Common attribute definitions

Common attributes, including those in the groups listed above, are defined as follows.

### @align (complex table attributes)

Specifies the **horizontal** alignment of text in table **entries**. The following values are valid:

#### left

Indicates left alignment of the text.

#### right

Indicates right alignment of the text.

#### center

Indicates center alignment of the text.

#### justify

Justifies the contents to both the left and the right.

### **char**

Indicates character alignment. The text is aligned with the first occurrence of the character specified by the @char attribute.

### **-dita-use-conref-target**

See [Using the -dita-use-conref-target value](#) for more information.

The @align attribute is available on the following table elements: <colspec>, <entry>, and <tgroup>.

### **@cascade (common map attributes)**

Specifies how metadata attributes cascade within a map. The specification defines the following values:

#### **merge**

Indicates that the metadata attributes cascade, and that the values of the metadata attributes are additive. This is the processing default for the @cascade attribute.

#### **nomerge**

Indicates that the metadata attributes cascade, but that they are not additive for <topicref> elements that specify a different value for a specific metadata attribute. If the cascading value for an attribute is already merged based on multiple ancestor elements, that merged value continues to cascade until a new value is encountered. That is, setting cascade="nomerge" does not undo merging that took place on ancestor elements.

Processors can also define custom, implementation-specific tokens for this attribute.

See [Cascading of metadata attributes in a DITA map](#) for more information about how this attribute interacts with metadata attributes.

### **@char (complex table attributes)**

Specifies the alignment character, which is the character that is used for aligning the text in table entries. This attribute applies when align="char". A value of "" (the null string) means there is no aligning character.

For example, if align="char" and char="." are specified, then text in the table entry aligns with the first occurrence of the period within the entry. This might be useful if decimal alignment is required.

The @char attribute is available on the following table elements: <colspec> and <entry>.

### **@charoff (complex table attributes)**

Specifies the horizontal offset of the alignment character that is specified by the @char attribute. The value is a greater-than-zero number that is less than or equal to 100. It represents the percentage of the current column width by which the text is offset to the left of the alignment character.

For example, if align="char", char=".", and charoff="50" are all specified, then text in the table entry is aligned 50% of the distance to the left of the first occurrence of the period character within the table entry.

The @charoff attribute is available on the following table elements: <colspec> and <entry>.

### **@chunk (common map attributes)**

Specifies how a processor should render a map or branch of a map. For example, it can be used to specify that individual topic documents should be rendered as a single document, or that a single document with multiple topics should be rendered as multiple documents.

The following values are valid:

**combine**

Instructs a processor to combine the referenced source documents for rendering purposes. **This** is intended for cases where a publishing process normally results in a single output artifact for each source XML document.

**split**

Instructs a processor to split each topic from the referenced source document into its own document for rendering purposes. **This** is intended for cases where a publishing process normally results in a single output artifact for each source XML document, regardless of how many DITA topics exist within each source document.

Processors can also define custom, implementation-specific tokens for this attribute.

For a detailed description of the @chunk attribute and its usage, see [Chunking](#).

**@collection-type (common map attributes)**

Specifies how topics or links relate to each other. The processing default is "unordered", although no default is specified in the OASIS-provided grammar files. The following values are valid:

**unordered**

Indicates that the order of the child topics is not significant.

**sequence**

Indicates that the order of the child topics is significant. Output processors will typically link between them in order.

**choice**

Indicates that one of the children should be selected.

**family**

Indicates a tight grouping in which each of the referenced topics not only relates to the current topic but also relate to each other.

**Comment by Kristen J Eberlein on 28 September 2022**

Here is the content from the "DITA map attributes" topic:

**@collection-type**

The @collection-type attribute specifies how the children of a <topicref> element relate to their parent and to each other. This attribute, which is set on the parent element, typically is used by processors to determine how to generate navigation links in the rendered topics. For example, a @collection-type value of "sequence" indicates that children of the specifying <topicref> element represent an ordered sequence of topics; processors might add numbers to the list of child topics or generate next/previous links for online presentation. This attribute is available in topics on the <linklist> and <linkpool> elements, where it has the same behavior. Where the @collection-type attribute is available on elements that cannot directly contain elements, the behavior of the attribute is undefined.

**Disposition: Unassigned**

**Comment by Kristen J Eberlein on 28 September 2022**

In the definitions of the supported values, do we want to refer to "resources" instead of "topics"? Since we specify that @collection-type specifies "how topics **or** links relate to each other" ...

**Disposition: Unassigned**

### **@colsep (complex table attributes)**

Specifies whether to render column separators between table entries. The following values are valid: "0" (no separators) and "1" (separators).

The @colsep attribute is available on the following table elements: <colspec>, <entry>, <table>, and <tgroup>.

### **@compact**

Specifies whether the vertical spacing between list items is tightened. The following values are valid: "yes", "no", and "-dita-use-conref-target". Some DITA processors or output formats might not support the @compact attribute.

### **@datatype (data-element attributes)**

Specifies the type of data contained in the @value attribute or within the <data> element. A typical use of @datatype will be the identifying URI for an XML Schema datatype.

### **@DITAArchVersion (architectural attributes)**

Specifies the version of the DITA architecture that is in use. This attribute is in the namespace <http://dita.oasis-open.org/architecture/2005/>. This attribute is specified in the topic and map modules, and it uses a default value of the current version of DITA. The current default is "2.0".

### **@duplicates**

Specifies whether duplicate links are removed from a group of links. Duplicate links are links that address the same resource using the same properties, such as link text and link role. How duplicate links are determined is processor-specific. The following values are valid:

#### **yes**

Specifies that duplicate links are retained.

#### **no**

Specifies that duplicate links are removed.

#### **-dita-use-conref-target**

See [Using the -dita-use-conref-target value](#) for more information.

The suggested processing default is "yes" within <linklist> elements and "no" for other links.

#### **Comment by robander on Dec 28 2021**

"How duplicate links are determined is processor-specific" ==> this should be included in any updates to standardize language around "implementation dependent".

**Disposition: Unassigned**

### **@encoding (inclusion attributes)**

#### **Comment by Kristen J Eberlein on 29 April 2019**

Can we replace "should" in the following definition?

**Disposition: Unassigned**

Specifies the character encoding to use when translating the character data from the referenced content. The value should be a valid encoding name. If not specified, processors may make attempts to automatically determine the correct encoding, for example using HTTP headers, through analysis of the binary structure of the referenced data, or the <?xml?> processing instruction when including XML as text. The resource should be treated as UTF-8 if no other encoding information can be determined.

When `parse="xml"`, standard XML parsing rules apply for the detection of character encoding. The necessity and uses of `@encoding` for non-standard values of `@parse` are implementation-dependent.

### **@expand (display attributes)**

Specifies the horizontal placement of the element. The following values are valid:

#### **column**

Indicates that the element is aligned with the current column margin.

#### **page**

Indicates that the element is placed on the left page margin for left-to-right presentation or the right page margin for right-to-left presentation.

#### **spread**

Indicates that the object is rendered across a multi-page spread. If the output format does not have anything that corresponds to spreads, then "spread" has the same meaning as "page".

#### **textline**

**Indicates** that the element is aligned with the left (for left-to-right presentation) or right (for right-to-left presentation) margin of the current text line and takes indentation into account.

#### **-dita-use-conref-target**

See [Using the -dita-use-conref-target value](#) for more information.

For `<table>`, in place of the `@expand` attribute that is used by other DITA elements, the `@pgwide` attribute is used in order to conform to the OASIS Exchange Table Model.

Some processors or output formats might not support all values.

### **@expiry (date attributes)**

Specifies the date when the information should be retired or refreshed. The date is specified using the ISO 8601 format: `YYYY-MM-DD`, where `YYYY` is the year, `MM` is the month (01 to 12), and `DD` is the day (01-31).

### **@format (link-relationship attributes)**

Specifies the format of the resource that is referenced. See [B.4 STUB CONTENT](#) (53) for detailed information on supported values and processing implications.

### **@frame (display attributes)**

Specifies which portion of a border surrounds the element. The following values are valid:

#### **all**

Indicates that a line is rendered at the top, bottom, left, and right of the containing element.

#### **bottom**

Indicates that a line is rendered at the bottom of the containing element.

#### **none**

Indicates that no lines are rendered.

#### **sides**

Indicates that a line is rendered at the left and right of the containing element.

#### **top**

Indicates that a line is rendered at the top of the containing element.

#### **topbot**

Indicates that a line is rendered at the top and bottom of the containing element.

#### **-dita-use-conref-target**

See [Using the -dita-use-conref-target value](#) for more information.

Some processors or output formats might not support all values.

**@golive (date attributes)**

Specifies the publication or general availability (GA) date. The date is specified using the ISO 8601 format: *YYYY-MM-DD*, where *YYYY* is the year, *MM* is the month (01 to 12), and *DD* is the day (01-31).

**@headers**

Specifies which entries in the current table provide headers for this cell. The `@headers` attribute contains an unordered set of unique, space-separated tokens, each of which is an ID reference of an entry from the same table.

**@href (link-relationship attributes)**

Specifies a reference to a resource. See [B.4 STUB CONTENT \(53\)](#) for detailed information on supported values and processing implications.

**@keycol (simpletable attributes)**

Specifies the column that contains the content that represents the key to the tabular structure. If `@keycol` is present and assigned a numerical value, the specified column is treated as a vertical header.

**@keyref**

Specifies a key name that acts as a redirectable reference based on a key definition within a map. See [B.4 STUB CONTENT \(53\)](#) for information on using this attribute.

For HDITA, the equivalent of `@keyref` is `@data-keyref`

**Comment by robander**

The definition above for `@keyref` should be synchronized with the definition in the linked section on keys.

**Disposition: Unassigned**

**@keys**

Specifies one or more names for a resource. See [B.4 STUB CONTENT \(53\)](#) for information on using this attribute.

For HDITA, the equivalent of `@keys` is `@data-keys`

**@keyscope (common map attributes)**

Specifies that the element marks the boundaries of a key scope.

See [B.4 STUB CONTENT \(53\)](#) for information on using this attribute.

**Comment by Kristen J Eberlein on 28 September 2022**

Here is the content from the "DITA map attributes" topic:

**@keyscope**

Defines a new scope for key definition and resolution, and gives the scope one or more names. For more information about key scopes, see [Indirect key-based addressing](#).

**Disposition: Unassigned**

**@linking (common map attributes)**

Specifies linking characteristics of a topic specific to the location of this reference in a map. If the value is not specified locally, the value might cascade from another element in the map (for cascade rules, see [Cascading of metadata attributes in a DITA map](#)).

**Comment by robander on Dec 28 2021**

The text below matches [1.3 spec text](#) but I'm nervous about "cannot link" type definition. It's describing how to generate links based on the current context in the map - it's not describing what the topic itself is allowed to link to, which is how I interpret "can".

**Disposition: Unassigned**

The following values are valid:

**targetonly**

A topic can only be linked to and cannot link to other topics.

**sourceonly**

A topic cannot be linked to but can link to other topics.

**normal**

A topic can be linked to and can link to other topics. Use this to override the linking value of a parent topic.

**none**

A topic cannot be linked to or link to other topics.

**-dita-use-conref-target**

See [Using the -dita-use-conref-target value](#) for more information.

**Comment by Kristen J Eberlein on 28 September 2022**

Here is the content from the "DITA map attributes" topic:

**@linking**

By default, the relationships between the topics that are referenced in a map are reciprocal:

- Child topics link to parent topics and vice versa.
- Next and previous topics in a sequence link to each other.
- Topics in a family link to their sibling topics.
- Topics referenced in the table cells of the same row in a relationship table link to each other. A topic referenced within a table cell does not (by default) link to other topics referenced in the same table cell.

This behavior can be modified by using the `@linking` attribute, which enables an author or information architect to specify how a topic participates in a relationship. The following values are valid:

**linking="none"**

Specifies that the topic does not exist in the map for the purposes of calculating links.

**linking="sourceonly"**

Specifies that the topic will link to its related topics but not vice versa.

**linking="targetonly"**

Specifies that the related topics will link to it but not vice versa.

**linking="normal"**

Default value. It specifies that linking will be reciprocal (the topic will link to related topics, and they will link back to it).

Authors also can create links directly in a topic by using the `<xref>` or `<link>` elements, but in most cases map-based linking is preferable, because links in topics create dependencies between topics that can hinder reuse.

Note that while the relationships between the topics that are referenced in a map are reciprocal, the relationships merely *imply* reciprocal links in generated output that includes



links. The rendered navigation links are a function of the presentation style that is determined by the processor.

**Disposition: Unassigned**

### **@name (data-element attributes)**

Defines a unique name for the object.

### **Comment by robander**

Do we need to specify the scope of "unique" here?

**Disposition: Unassigned**

### **@otherrole**

Specifies an alternate role for a link relationship when the `@role` attribute is set to "other".

### **@parse (inclusion attributes)**

Specifies the processing expectations for the referenced resource. Processors must support the following values:

#### **text**

The contents should be treated as plain text. Reserved XML characters should be displayed, and not interpreted as XML markup.

#### **xml**

The contents of the referenced resource should be treated as an XML document, and the referenced element should be inserted at the location of the `<include>` element. If a fragment identifier is included in the address of the content, processors must select the element with the specified ID. If no fragment identifier is included, the root element of the referenced XML document is selected. Any grammar processing should be performed during resolution, such that default attribute values are explicitly populated. Prolog content must be discarded.

It is an error to use `parse="xml"` anywhere other than within `<foreign>` or a specialization thereof.

Processors may support other values for the `@parse` attribute with proprietary processing semantics. Processors should issue warnings and use `<fallback>` when they encounter unsupported `@parse` values. Non-standard `@parse` instructions should be expressed as URIs.

**Note** Proprietary `@parse` values will likely limit the portability and interoperability of DITA content, so should be used with care.

### **@processing-role (common map attributes)**

Specifies whether the referenced resource is processed normally or treated as a resource that is only included in order to resolve references, such as key or content references. The following values are valid:

#### **normal**

Indicates that the resource is a readable part of the information set. It is included in navigation and search results. This is the default value for the `<topicref>` element.

#### **resource-only**

Indicates that the resource should be used only for processing purposes. It is not included in navigation or search results, nor is it rendered as a topic. This is the default value for the `<keydef>` element.

#### **-dita-use-conref-target**

See [Using the -dita-use-conref-target value](#) for more information.

If no value is specified but the attribute is specified on a containing element within a map or within the related-links section, the value cascades from the closest containing element.

#### **@relcolwidth (simpletable attributes)**

Specifies the width of each column in relationship to the width of the other columns. The value is a space-separated list of relative column widths. Each column width is specified as a positive integer or decimal number followed by an asterisk character.

For example, the value `relcolwidth="1* 2* 3*"` gives a total of 6 units across three columns. The relative widths are 1/6, 2/6, and 3/6 (16.7%, 33.3%, and 50%). Similarly, the value `relcolwidth="90* 150*"` causes relative widths of 90/240 and 150/240 (37.5% and 62.5%).

#### **@role**

Specifies the role that a linked topic plays in relationship with the current topic.

For example, in a parent/child relationship, the role would be "parent" when the target is the parent of the current topic, and "child" when the target is the child of the current topic. This can be used to sort and classify links when rendering.

The following values are valid:

##### **ancestor**

Indicates a link to a topic above the parent topic.

##### **child**

Indicates a link to a direct child such as a directly nested or dependent topic.

##### **cousin**

Indicates a link to another topic in the same hierarchy that is not a parent, child, sibling, next, or previous.

##### **descendant**

Indicates a link to a topic below a child topic.

##### **friend**

Indicates a link to a similar topic that is not necessarily part of the same hierarchy.

##### **next**

Indicates a link to the next topic in a sequence.

##### **other**

Indicates any other kind of relationship or role. The type of role is specified as the value for the `@otherrole` attribute.

##### **parent**

Indicates a link to a topic that is a parent of the current topic.

##### **previous**

Indicates a link to the previous topic in a sequence.

##### **sibling**

Indicates a link between two children of the same parent topic.

##### **-dita-use-conref-target**

See [Using the -dita-use-conref-target value](#) for more information.

#### **@rowheader (complex table attributes)**

Specifies whether the entries in the respective column are row headers. The following values are valid:

**firstcol**

Indicates that entries in the first column of the table are row headers. This applies when the @rowheader attribute is specified on the <table> element.

**headers**

Indicates that entries of the column that is described using the <colspec> element are row headers. This applies when the @rowheader attribute is specified on the <colspec> element.

**norowheader**

Indicates that entries in the first column are not row headers. This applies when the @rowheader attribute is specified on the <table> element.

**-dita-use-conref-target**

See [Using the -dita-use-conref-target value](#) for more information.

**Note** This attribute is not part of the OASIS Exchange Table Model upon which DITA tables are based. Some processors or output formats might not support all values.

The @rowheader attribute is available on the following table elements: <table> and <colspec>.

**@rowsep (complex table attributes)**

Specifies whether to render row separators between table entries. The following values are valid: "0" (no separators) and "1" (separators).

The @rowsep attribute is available on the following table elements: <colspec>, <entry>, <row>, <table>, and <tgroup>.

**@scale (display attributes)**

Specifies the percentage by which fonts are resized in relation to the normal text size. The value of this attribute is a positive integer. When used on <table> or <simpletable>, the following values are valid: "50", "60", "70", "80", "90", "100", "110", "120", "140", "160", "180", "200", and [-dita-use-conref-target](#) (53).

This attribute is primarily useful for print-oriented display. Some processors might not support all values.

If the @scale attribute is specified on an element that contains an image, the image is not scaled. The image is scaled **only** if a scaling property is explicitly specified for the <image> element.

**@scope (link-relationship attributes)**

Specifies the closeness of the relationship between the current document and the referenced resource. The following values are valid: "local", "peer", "external", and "-dita-use-conref-target".

See [B.4 STUB CONTENT](#) (53) for detailed information on supported values and processing implications.

**@scope**

Specifies that the current entry is a header for other table entries. The following values are valid:

**col**

Indicates that the current entry is a header for all cells in the column.

**colgroup**

Indicates that the current entry is a header for all cells in the columns that are spanned by this entry.

**row**

Indicates that the current entry is a header for all cells in the row.

**rowgroup**

Indicates that the current entry is a header for all cells in the rows that are spanned by this entry.

### **-dita-use-conref-target**

See [Using the -dita-use-conref-target value](#) for more information.

### **@search (common map attributes)**

Specifies whether the target is available for searching. If the value is not specified locally, the value might cascade from another element in the map (for cascade rules, see [Cascading of metadata attributes in a DITA map](#)). The following values are valid: "yes", "no", and "-dita-use-conref-target".

#### **Comment by Kristen J Eberlein on 28 September 2022**

Here is the content from the "DITA map attributes" topic:

#### **@search**

Specifies whether the topic is included in search indexes.

**Disposition: Unassigned**

### **@specializations (architectural attributes)**

Specifies the attribute-domain specializations that are included in the document-type shell. This attribute is set as a default within the document-type shell. The value varies depending on what domains are integrated into the document-type shell. For example, a grammar file that includes the specialized attributes @audience, @deliveryTarget, and @newBaseAtt would set the value to @props/audience @props/deliveryTarget @base/newBaseAtt.

### **@subjectrefs (common map attributes)**

Specifies one or more keys that are each defined by a subject definition in a subject scheme map. Multiple values are separated by white space.

### **@title-role (REQUIRED)**

Specifies the role that the alternative title serves. Multiple roles are separated by white space. The following roles are defined in the specification: "linking", "navigation", "search", "subtitle", and "hint".

Processors can define custom values for the @title-role attribute.

### **@toc (common map attributes)**

Specifies whether a topic appears in the table of contents (TOC) based on the current map context. If the value is not specified locally, the value might cascade from another element in the map (for cascade rules, see [Cascading of metadata attributes in a DITA map](#)). The following values are valid:

#### **yes**

The topic appears in a generated TOC.

#### **no**

The topic does not appear in a generated TOC.

### **-dita-use-conref-target**

See [B.4 STUB CONTENT](#) (53) for more information.

#### **Comment by Kristen J Eberlein on 28 September 2022**

Here is the content from the "DITA map attributes" topic:

#### **@toc**

Specifies whether topics are excluded from navigation output, such as a Web site map or an online table of contents. By default, <topicref> hierarchies are included in navigation output; relationship tables are excluded.

**Disposition: Unassigned**

**@type (link-relationship attributes)**

Describes the target of a reference. See [B.4 STUB CONTENT](#) (53) for detailed information on supported values and processing implications.

**@value (data-element attributes)**

Specifies a value associated with the current property or element.

**@valign (complex table attributes)**

Specifies the vertical alignment of text in table [entries](#). The following values are valid:

**bottom**

Indicates that text is aligned with the bottom of the table entry.

**middle**

Indicates that text is aligned with the middle of the table entry.

**top**

Indicates that text is aligned with the top of the table entry.

**-dita-use-conref-target**

See [Using the -dita-use-conref-target value](#) for more information.

The @valign attribute is available on the following table elements: <entry>, <tbody>, <thead>, and <row>.

**@xml:space**

Specifies how to handle white space in the current element. This attribute is provided on <pre>, <line>, and on elements specialized from those. It ensures that parsers respect white space that is part of the data in those elements, including line-end characters. When defined, it has a fixed value of "preserve", making it a default property of the element that cannot be changed or deleted by authors.

**@xmlns:ditaarch (architectural attributes)**

Declares the default DITA namespace. This namespace is declared as such in the RNG modules for <topic> and <map>, but it is specified as an attribute in the equivalent DTD-based modules. The value is fixed to "http://dita.oasis-open.org/architecture/2005/".

## B.4 STUB CONTENT

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STUB CONTENT

STUB CONTENT

[STUB CONTENT](#) (54)

[STUB CONTENT](#) (54)

STUB CONTENT

STUB CONTENT

STUB CONTENT

STUB CONTENT

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**STUB CONTENT**

## C Formatting suggestions

DITA defines fundamental document components. Since there is a reasonable expectation that such document components be formatted consistently, we suggest the following conventions.

**Table 1: Formatting expectations for DITA elements**

Element	Suggested formatting
<chdeschd>	Apply bold highlighting to the contents of the <chdeschd> element.
<choicetable>	Unless the @keycol attribute is set to "0", processors typically apply bold highlighting to the contents of the "Option" column.
<choptionhd>	Apply bold highlighting to the contents of the <choptionhd> element.
<codeblock>	Use a monospaced font for the contents of the <codeblock> element.
<codeph>	Use a monospaced font for the contents of the <codeph> element.
<menucascade>	Separate <uicontrol> elements with a character to represent the menu cascade.
<numcharref>	Surround the contents of the <numcharref> element with a leading ampersand (&) and a trailing semi-colon (;).
<parameterentity>	Surround the contents of the <numcharref> element with a leading percentage sign (%) and a trailing semi-colon (;).
<screen>	Enclose the contents of the <screen> element with a box to suggest a computer display screen.
<shortcut>	Highlight the keyboard shortcut with underlining.
<syntaxdiagram>	Traditionally, the syntax diagram is formatted with "railroad tracks" that connect the units of the syntax together, but the presentation might differ depending on the output media.
<textentity>	Surround the contents of the <textentity> element with a leading ampersand (&) and a trailing semi-colon (;).
<var>	Apply italic highlighting to the contents of the <var> element.
<xmlatt>	Precede the contents of the <xmlatt> element with a commercial at symbol (@) or equals character (=) .
<xmlelement>	Surround the contents of the <xmlelement> element with leading (<) and trailing (>) angle brackets.
<>	

# Index

## A

attribute groups  
  architectural attributes [23](#)  
  common map attributes [23](#)  
  complex table attributes [23](#)  
  data-element attributes [23](#)  
  date attributes [23](#)  
  display attributes [23](#)  
  ID and conref attributes [23](#)  
  inclusion attributes [23](#)  
  link relationship attributes [23](#)  
  localization attributes [23](#)  
  metadata attributes [23](#)  
  simple table attributes [23](#)  
  universal [36](#)  
  universal attributes [23](#)

## C

`<chdesc>` [5](#)  
`<chdeschd>`  
  processing expectations  
    `<chdeschd>` [5](#)  
`<chhead>` [5](#)  
`<choice>` [6](#)  
choice tables  
  alternate header text [5](#)  
  descriptions [5](#)  
  `@keycol` [7](#)  
  options [8](#)  
  overview [7](#)  
  rows [9](#)  
`<choices>` [6](#)  
`<choicetable>` [7](#)  
`<choption>` [8](#)  
`<choptionhd>` [9](#)  
`<chrow>` [9](#)  
`<cmd>` [9](#)  
common attributes [41](#)  
`<context>` [10](#)

## F

formatting expectations  
  `<steps>` [14](#)

## I

`<info>` [10](#)

## K

`@keycol` [7](#)

## P

`<postreq>` [11](#)  
`<prereq>` [11](#)  
processing expectations  
  `<chhead>` [5](#)  
  `<choptionhd>` [9](#)

## R

rendering expectations  
  `<prereq>` [11](#)  
  `<stepsection>` [15](#)  
`<result>` [12](#)

## S

`<step>` [13](#)  
`<stepresult>` [13](#)  
`<steps>` [14](#)  
`<steps-informal>` [14](#)  
`<steps-unordered>` [17](#)  
`<stepsection>` [15](#)  
`<steptroubleshooting>` [16](#)  
`<stepxmp>` [17](#)

## T

tables  
  choice tables [7](#)  
`<task>` [18](#)  
task elements [5](#), [14](#), [15](#)  
  `<chdesc>` [5](#)  
  `<chdeschd>` [5](#)  
  `<chhead>` [5](#)  
  `<choice>` [6](#)  
  `<choices>` [6](#)  
  `<choicetable>` [7](#)  
  `<choption>` [8](#)  
  `<choptionhd>` [9](#)  
  `<chrow>` [9](#)  
  `<cmd>` [9](#)  
  `<context>` [10](#)  
  `<info>` [10](#)  
  `<postreq>` [11](#)  
  `<prereq>` [11](#)



task elements (*continued*)

<result> [12](#)  
<step> [13](#)  
<stepresult> [13](#)  
<steps> [14](#)  
<steps-unordered> [17](#)  
<steptroubleshooting> [16](#)  
<stepxmp> [17](#)  
<task> [18](#)  
<taskbody> [19](#)  
<tasktroubleshooting> [20](#)  
<tutorialinfo> [21](#)  
<taskbody> [19](#)  
<tasktroubleshooting> [20](#)  
<tutorialinfo> [21](#)

## U

universal attribute group [36](#)