

**Stage 3 proposal: Feature 13097**

# Contents

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# Stage 3 proposal: Feature 13097

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Proposal to add a new troubleshooting topic type.

## Champion

DITA Technical Communications Subcommittee.

## Tracking information

- First draft of proposal completed on 4 April, 2012
- Second draft of proposal completed on 6 June, 2013
- Third draft of proposal completed on 30 July, 2013
- Fourth draft of proposal completed on 19 August, 2013

Event	Date	Links
Stage 1 proposal accepted	22 May 2012	<a href="#">DITA TC Minutes</a>
Stage 2 proposal submitted	5 July 2013	<a href="#">Latest revision</a>
Stage 2 proposal discussed	23 July 2013 through 20 August 2013	<a href="#">DITA TC Minutes 23 July 2013</a> <a href="#">DITA TC Minutes 30 July 2013</a> <a href="#">DITA TC Minutes 06 August 2013</a> <a href="#">DITA TC Minutes 20 August 2013</a>
Stage 2 proposal approved		<a href="#">DITA TC Minutes 27 August 2013</a>
Stage 3 proposal submitted to reviewers		
Stage 3 proposal (this document) submitted		

## Approved technical requirements

Add troubleshooting topic. A troubleshooting topic describes how to solve a particular problem a user has encountered. This topic typically contains the following sections: a problem statement followed by one or more potential solutions. Each potential solution consists of a possible cause followed by a corresponding remedy.

## Dependencies or interrelated proposals

The introduction of a troubleshooting topic does not depend on, or interact with, any other submitted proposals. However, three other proposals relating to troubleshooting semantics have already been approved. The Technical Communication Subcommittee has provided text explaining how the troubleshooting semantics introduced through these proposals differ from those used in the troubleshooting topic.

- 13086** Troubleshooting element within <step>. Status: approved
- 13096** Troubleshooting section within <taskbody>. Status: approved
- 13098** “troubleshooting” value for the type attribute on <note>. Status: approved

## Structural implementation

---

The troubleshooting topic introduces three new files to the technical content package. Corresponding XML Schema files will also be required. Listings of the DTD and its two supporting entity files follow.

### Listing: troubleshooting.dtd

```

<?xml version="1.0" encoding="UTF-8"?>
<!-- ===== HEADER ===== -->
<!-- MODULE:      DITA Troubleshooting DTD -->
<!-- VERSION:    1.2 -->
<!-- DATE:       March 2012 -->
<!-- -->
<!-- ===== PUBLIC DOCUMENT TYPE DEFINITION ===== -->
<!--          TYPICAL INVOCATION -->
<!-- -->
<!-- Refer to this file by the following public identifier or an
     appropriate system identifier
PUBLIC "-//OASIS//DTD DITA Troubleshooting//EN"
     Delivered as file "troubleshooting.dtd" -->
<!-- The public ID above refers to the latest version of this DTD.
     To refer to this specific version, you may use this value:
PUBLIC "-//OASIS//DTD DITA 1.2 Troubleshooting//EN" -->
<!-- ===== SYSTEM: Darwin Information Typing Architecture (DITA) ===== -->
<!-- PURPOSE:      DTD to describe DITA Troubleshooting topics -->
<!-- -->
<!-- ORIGINAL CREATION DATE:
<--       March 2012 -->
<!-- -->
<!--          (C) Copyright OASIS Open 2012. -->
<!-- ===== TOPIC ENTITY DECLARATIONS ===== -->
<!-- -->

<!ENTITY % troubleshooting-dec
  PUBLIC "-//OASIS//ENTITIES DITA 1.2 Troubleshooting//EN"
  "troubleshooting.ent"
>%troubleshooting-dec;

<!-- ===== DOMAIN ENTITY DECLARATIONS ===== -->
<!-- -->

<!ENTITY % hi-d-dec
  PUBLIC "-//OASIS//ENTITIES DITA 1.2 Highlight Domain//EN"
  ".../base/dtd/highlightDomain.ent"
>%hi-d-dec;

```

```

<!ENTITY % ut-d-dec
  PUBLIC "-//OASIS//ENTITIES DITA 1.2 Utilities Domain//EN"
    ".../base/dtd/
utilitiesDomain.ent"
>%ut-d-dec;

<!ENTITY % indexing-d-dec
  PUBLIC "-//OASIS//ENTITIES DITA 1.2 Indexing Domain//EN"
    ".../base/dtd/
indexingDomain.ent"
>%indexing-d-dec;

<!ENTITY % hazard-d-dec
  PUBLIC "-//OASIS//ENTITIES DITA 1.2 Hazard Statement Domain//EN"
    ".../base/dtd/hazardstatementDomain.ent"
>%hazard-d-dec;

<!ENTITY % abbrev-d-dec
  PUBLIC "-//OASIS//ENTITIES DITA 1.2 Abbreviated Form Domain//EN"
    ".../base/dtd/abbreviateDomain.ent"
>%abbrev-d-dec;

<!ENTITY % pr-d-dec
  PUBLIC "-//OASIS//ENTITIES DITA 1.2 Programming Domain//EN"
    ".../base/dtd/programmingDomain.ent"
>%pr-d-dec;

<!ENTITY % sw-d-dec
  PUBLIC "-//OASIS//ENTITIES DITA 1.2 Software Domain//EN"
    ".../base/dtd/softwareDomain.ent"
>%sw-d-dec;

<!ENTITY % ui-d-dec
  PUBLIC "-//OASIS//ENTITIES DITA 1.2 User Interface Domain//EN"
    ".../base/dtd/uiDomain.ent"
>%ui-d-dec;

<!-- ===== DOMAIN ATTRIBUTE DECLARATIONS -->
<!-- ===== DOMAIN EXTENSIONS -->
<!-- ===== One for each extended base element, with
      the name of the domain(s) in which the
      extension was declared -->

<!ENTITY % pre          "pre |
  %pr-d-pre; |
  %sw-d-pre; |
  %ui-d-pre;
">
<!ENTITY % keyword      "keyword |
  %pr-d-keyword; |
  %sw-d-keyword; |
  %ui-d-keyword;
">
<!ENTITY % ph           "ph |
  %hi-d-ph; |

```

```

        %pr-d-ph; |
        %sw-d-ph; |
        %ui-d-ph;
      ">
<!ENTITY % term          "term |           %abbrev-d-term;
                           ">
                           "fig |           %pr-d-fig; |
                           %ut-d-fig;
                         ">
<!ENTITY % dl            "dl |           %pr-d-dl;
                           ">
                           "index-base |   %indexing-d-index-base;
                         ">
<!ENTITY % note          "note |           %hazard-d-note;
                           ">

<!-- ===== DOMAIN ATTRIBUTE EXTENSIONS -->
<!ENTITY % props-attribute-extensions  ""      >
<!ENTITY % base-attribute-extensions   ""      >

<!-- ===== TOPIC NESTING OVERRIDE -->
<!!-- Redefine the infotype entity to exclude
     other topic types and disallow nesting      -->
<!ENTITY % troubleshooting-info-types
      "task"                                     >

<!-- ===== DOMAINS ATTRIBUTE OVERRIDE -->
<!!-- Must be declared ahead of the DTDs, which
     puts @domains first in order                -->

<!ENTITY included-domains
      "&troubleshooting-att;
       &hi-d-att;
       &ut-d-att;
       &indexing-d-att;
       &hazard-d-att;
       &abbrev-d-att;
       &pr-d-att;
       &sw-d-att;
       &ui-d-att;
       &taskbody-constraints;
      "
    >

<!-- ===== CONTENT CONSTRAINT INTEGRATION -->
<!!-- PUBLIC "-//OASIS//ELEMENTS DITA 1.2 Strict Taskbody Constraint//EN"

```

```

    "strictTaskbodyConstraint.mod">
%strictTaskbody-c-def;

<!-- ===== -->
<!--          TOPIC ELEMENT INTEGRATION      -->
<!-- ===== -->

<!--          Embed topic to get generic elements      -->
<!ENTITY % topic-type PUBLIC
"--//OASIS//ELEMENTS DITA 1.2 Topic//EN"
"../../base/dtd/topic.mod">
%topic-type;

<!--          Embed troubleshooting to get specific elements      -->
<!ENTITY % troubleshooting-typemod
PUBLIC
"--//OASIS//ELEMENTS DITA 1.2 Troubleshooting//EN"
"troubleshooting.mod">
%troubleshooting-typemod;

<!-- ===== -->
<!--          DOMAIN ELEMENT INTEGRATION      -->
<!-- ===== -->

<!ENTITY % hi-d-def
PUBLIC "--//OASIS//ELEMENTS DITA 1.2 Highlight Domain//EN"
"../../base/dtd/highlightDomain.mod"
>%hi-d-def;

<!ENTITY % ut-d-def
PUBLIC "--//OASIS//ELEMENTS DITA 1.2 Utilities Domain//EN"
"../../base/dtd/utilitiesDomain.mod"
>%ut-d-def;

<!ENTITY % indexing-d-def
PUBLIC "--//OASIS//ELEMENTS DITA 1.2 Indexing Domain//EN"
"../../base/dtd/indexingDomain.mod"
>%indexing-d-def;

<!ENTITY % hazard-d-def
PUBLIC "--//OASIS//ELEMENTS DITA 1.2 Hazard Statement Domain//EN"
"../../base/dtd/hazardstatementDomain.mod"
>%hazard-d-def;

<!ENTITY % abbrev-d-def
PUBLIC "--//OASIS//ELEMENTS DITA 1.2 Abbreviated Form Domain//EN"
"abbreviateDomain.mod"
>%abbrev-d-def;

<!ENTITY % ui-d-def
PUBLIC "--//OASIS//ELEMENTS DITA 1.2 User Interface Domain//EN"
"uiDomain.mod"
>%ui-d-def;

<!ENTITY % pr-d-def
PUBLIC "--//OASIS//ELEMENTS DITA 1.2 Programming Domain//EN"
"programmingDomain.mod"
>%pr-d-def;

<!ENTITY % sw-d-def
PUBLIC "--//OASIS//ELEMENTS DITA 1.2 Software Domain//EN"
"softwareDomain.mod"

```

```
>%sw-d-def;

<!-- Call task.mod to make available <steps> and its descendants -->
<!ENTITY % task-typemod PUBLIC
"//OASIS//ELEMENTS DITA 1.2 Task//EN"
"task.mod"                                     >
%task-typemod;

<!-- ===== End DITA Troubleshooting DTD =====
-->
```

## Listing: troubleshooting.ent

```
<?xml version="1.0" encoding="UTF-8"?>
<!-- ===== HEADER ===== -->
<!-- MODULE:      DITA Troubleshooting Entity -->
<!-- VERSION:    1.2 -->
<!-- DATE:       March 2012 -->
<!-- ===== PUBLIC DOCUMENT TYPE DEFINITION ===== -->
<!--           TYPICAL INVOCATION -->
<!--
<!-- Refer to this file by the following public identifier or an
     appropriate system identifier
PUBLIC "-//OASIS//ENTITIES DITA Troubleshooting//EN"
     Delivered as file "troubleshooting.ent" -->
<!-- ===== SYSTEM:      Darwin Information Typing Architecture (DITA) ===== -->
<!-- PURPOSE:      Declaring the domain entity for troubleshooting -->
<!--
<!-- ORIGINAL CREATION DATE:
<!--       March 2012 -->
<!--
<!--       (C) Copyright OASIS Open 2012. -->
<!--       All Rights Reserved. -->
<!--
<!-- UPDATES:      -->
<!-- ===== TROUBLESHOOTING ENTITIES ===== -->

<!ENTITY troubleshooting-att
  "(topic troubleshooting+task/steps+task/steps-unordered)">

<!-- ===== End Troubleshooting Entities ===== -->
```

## Listing: troubleshooting.mod

```

<?xml version="1.0" encoding="UTF-8"?>
<!-- ===== HEADER ===== -->
<!-- MODULE: DITA Troubleshooting -->
<!-- VERSION: 1.3 -->
<!-- DATE: March 2012 -->
<!-- -->
<!-- ===== PUBLIC DOCUMENT TYPE DEFINITION ===== -->
<!-- TYPICAL INVOCATION -->
<!-- -->
<!-- Refer to this file by the following public identifier or an
     appropriate system identifier
PUBLIC "-//OASIS//ELEMENTS DITA Troubleshooting//EN"
     Delivered as file "troubleshooting.mod" -->
<!-- -->
<!-- SYSTEM: Darwin Information Typing Architecture (DITA) -->
<!-- -->
<!-- PURPOSE: Define elements and specialization attributes -->
<!-- for troubleshooting and other resolution -->
<!-- -->
<!-- ORIGINAL CREATION DATE: -->
<!-- March 2012 -->
<!-- -->
<!-- (C) Copyright OASIS Open 2005, 2009. -->
<!-- -->

<!-- ===== ARCHITECTURE ENTITIES ===== -->
<!-- -->
<!-- -->

<!-- default namespace prefix for DITAArchVersion attribute can be
     overridden through predefinition in the document type shell -->
<!ENTITY % DITAArchNSPrefix
  "ditaarch"
>

<!-- must be instanced on each topic type -->
<!ENTITY % arch-atts
  "xmlns:%DITAArchNSPrefix;
    CDATA
      #FIXED 'http://dita.oasis-open.org/
architecture/2005/'
    %DITAArchNSPrefix;:DITAArchVersion
    CDATA
      '1.3'
"
>

<!-- ===== SPECIALIZATION OF DECLARED ELEMENTS ===== -->
<!-- -->
<!-- -->

<!ENTITY % troubleshooting-info-types

```

```

"%info-types;
"
>

<!-- ===== ELEMENT NAME ENTITIES -->
<!--
ELEMENT NAME ENTITIES
-->
<!-- ===== -->

<!ENTITY % cause          "cause"          >
<!ENTITY % condition      "condition"      >
<!ENTITY % remedy         "remedy"         >
<!ENTITY % responsibleParty "responsibleParty" >
<!ENTITY % troubleshooting "troubleshooting" >
<!ENTITY % troublebody    "troublebody"    >
<!ENTITY % troubleSolution "troubleSolution" >

<!-- ===== COMMON ELEMENT SETS -->
<!--
COMMON ELEMENT SETS
-->
<!-- ===== -->

<!ENTITY % section.blocks.only.cnt
  "(%basic.block; |
   %data.elements.incl; |
   %foreign.unknown.incl; |
   %sectiondiv; |
   %txt.incl;)*"
  "
>

<!-- ===== DOMAINS ATTRIBUTE OVERRIDE -->
<!--
DOMAINS ATTRIBUTE OVERRIDE
-->
<!-- ===== -->

<!ENTITY included-domains
  """
>

<!-- ===== ELEMENT DECLARATIONS -->
<!--
ELEMENT DECLARATIONS
-->
<!-- ===== -->

<!--           LONG NAME: Troubleshooting          -->
<!ENTITY % troubleshooting.content
  "((%title;),
   (%titlealts;)?,
   (%abstract; |
   %shortdesc;)?,
   (%prolog;)?,
   (%troublebody;)?,
   (%related-links;)?,
   (%troubleshooting-info-types;)* )"
>
<!ENTITY % troubleshooting.attributes
  "id
   ID
   #REQUIRED
   %conref-atts;
   %select-atts;
   %localization-atts;
   outputclass

```

```

        CDATA
        #IMPLIED"
>
<!ELEMENT troubleshooting      %troubleshooting.content;*>
<!ATTLIST troubleshooting
          %troubleshooting.attributes;
          %arch-atts;
          domains
          CDATA
          "&included-domains;">

<!-- LONG NAME: Troubleshooting Body --&gt;
&lt;!ENTITY % troublebody.content
  "(
    (%condition;)?,
    (%troubleSolution;)+
  )?"&gt;
&lt;!ELEMENT troublebody      %troublebody.content;*&gt;
&lt;!ATTLIST troublebody
          "%id-atts;
          %localization-atts;
          base
          CDATA
          #IMPLIED
          %base-attribute-extensions;
          outputclass
          CDATA
          #IMPLIED"
&gt;
&lt;!ELEMENT troublebody      %troublebody.attributes;*&gt;

<!-- LONG NAME: Cause --&gt;
&lt;!ENTITY % cause.content
  "(%section.blocks.only.cnt;)?"
&gt;
&lt;!ELEMENT cause      %cause.content;*&gt;
&lt;!ATTLIST cause
          %cause.attributes;*&gt;

<!-- LONG NAME: Condition --&gt;
&lt;!ENTITY % condition.content
  "(%section.blocks.only.cnt;)?"
&gt;
&lt;!ELEMENT condition      %condition.content;*&gt;
&lt;!ATTLIST condition
          %condition.attributes;*&gt;

        CDATA
        #IMPLIED"
&gt;
&lt;!ELEMENT condition      %condition.content;*&gt;
</pre>

```

```

<!ATTLIST condition      %condition.attributes;>

<!--          LONG NAME: Remedy          -->
<!ENTITY % remedy.content
  "(%responsibleParty;)?,
   (%steps; | %steps-unordered;)
  )?">
>
<!ENTITY % remedy.attributes
  "spectitle
   CDATA
   #IMPLIED
   %univ-atts;
   outputclass
   CDATA
   #IMPLIED">
>
<!ELEMENT remedy      %remedy.content;>
<!ATTLIST remedy      %remedy.attributes;>

<!--          LONG NAME: Troubleshooting Body division          -->
<!ENTITY % troubleSolution.content
  "(%cause;)?,
   %remedy;)">
>
<!ENTITY % troubleSolution.attributes
  "%univ-atts;
   outputclass
   CDATA
   #IMPLIED">
>
<!ELEMENT troubleSolution      %troubleSolution.content;>
<!ATTLIST troubleSolution      %troubleSolution.attributes;>

<!--          LONG NAME: Responsible Party          -->
<!ENTITY % responsibleParty.content
  "(%para.cnt;)*">
>
<!ENTITY % responsibleParty.attributes
  "name CDATA #IMPLIED">
>
<!ELEMENT responsibleParty      %responsibleParty.content;>
<!ATTLIST responsibleParty      %responsibleParty.attributes;>

<!-- ===== SPECIALIZATION ATTRIBUTE DECLARATIONS -->
<!-- =====-->
<!-- =====-->
<!-- =====-->

<!ATTLIST troubleshooting      %global-atts;  class CDATA "- topic/topic
troubleshooting/troubleshooting ">
<!ATTLIST troublebody        %global-atts;  class CDATA "- topic/body
troubleshooting/troublebody ">
<!ATTLIST troubleSolution    %global-atts;  class CDATA "- topic/bodydiv
troubleshooting/troubleSolution ">
<!ATTLIST cause            %global-atts;  class CDATA "- topic/section
troubleshooting/cause ">
<!ATTLIST condition         %global-atts;  class CDATA "- topic/section
troubleshooting/condition ">
<!ATTLIST remedy            %global-atts;  class CDATA "- topic/section
troubleshooting/remedy ">
<!ATTLIST responsibleParty %global-atts;  class CDATA "- topic/p
troubleshooting/responsibleParty ">

```

```
<!-- ===== End DITA Troubleshooting =====-->
```

## Specification documentation

---

The troubleshooting topic requires changes to the architectural specification and to the language specification.

### Changes to the architectural specification

The architectural specification requires a new topic describing troubleshooting, plus it requires a new section for existing topic “Technical content: Document and information types”

#### Troubleshooting topic

The troubleshooting document type provides markup for corrective action information such as troubleshooting and alarm clearing.

#### The troubleshooting information type

In its simplest form, troubleshooting information follows this pattern:

1. A condition or symptom. Usually the condition or symptom is an undesirable state in a system, a product, or a service that a reader may wish to correct.
2. A cause for the condition or symptom
3. A remedy for the condition or symptom

The troubleshooting topic provides sections for describing the condition, causes, and remedies needed to restore a system, a product, or a service to normal.

For some conditions there could be more than one cause-remedy pair. The troubleshooting topic accommodates this. Typically, a cause is immediately followed by its remedy. Multiple cause-remedy pairs can provide a series of successive fall-backs for resolving a condition.

The troubleshooting information type can also be used to document alarm clearing strategies.

#### The structure of the troubleshooting topic

The top-level element for troubleshooting topics is <troubleshooting>. The <troubleshooting> element contains a title with optional alternative titles (titlealts), a short description or abstract, a prolog, a troublebody, and related-links.

<troublebody> is the main body element in a troubleshooting topic. The <troublebody> element contains the following elements:

**<condition>** This element is the first child of <troublebody>, and it describes the condition or symptom associated with the some undesirable state in a system, a product, or a service. Typically, this element is used, even though it is optional. In cases where the title already connotes the condition, this element should not be used.

**<troubleSolution>** One or more <troubleSolution> elements must appear after the <condition> element in <troublebody> element. <troubleSolution> is a wrapper element for <cause> and <remedy>, each of which are a cause-remedy pair.

The <troubleSolution> element contains the following elements:

**<cause>** This optional, first-child of <troubleSolution> describes a possible cause for the <condition>.

**<remedy>** This required last-child of <troubleSolution> describes a possible remedy for the <condition>.

The `<remedy>` element begins with an optional `<responsibleParty>` element followed by either a `<steps>` element or a `<steps-unordered>` element. The content models for `<steps>` and `<steps-unordered>` are borrowed from `<task>`. This allows remedy to reuse steps from tasks.

Here is an example of a troubleshooting topic:

```

<troubleshooting id="nologon">
    <title>Cannot log on</title>
    <shortdesc>Login attempts have failed</shortdesc>
    <troublebody>
        <condition>
            <p>The system will not accept your login credentials.</p>
        </condition>
        <troubleSolution>
            <cause>
                <p>Caps Lock key may be on.</p>
            </cause>
            <remedy><steps-unordered>
                <step>
                    <cmd>Verify that the Caps Lock key is off.</cmd>
                </step>
            </steps-unordered>
            </remedy>
        </troubleSolution>
        <troubleSolution>
            <cause>
                <p>The password you are using might not match the one
                   stored in the system.</p>
            </cause>
            <remedy id="gotoaccountmanagement">
                <steps>
                    <step>
                        <cmd>Open a Web browser window</cmd>
                    </step>
                    <step>
                        <cmd>Go to <xref href="http://your.itdept.com/
reset.html"
                           format="html" scope="external">Account
                           management</xref>,
                           and follow the instructions</cmd>
                    </step>
                </steps>
            </remedy>
        </troubleSolution>
        <troubleSolution>
            <cause>
                <p>The account name you are using might not match one
                   stored in the system.</p>
            </cause>
            <remedy conref="#nologon/gotoaccountmanagement"/>
        </troubleSolution>
    </troublebody>
</troubleshooting>

```

## Modules

The following DITA modules are provided for the troubleshooting topic.

`troubleshooting.mod`, `troubleshooting.ent`  
`troubleshootingMod.xsd`, `troubleshootingGrp.xsd`

## Addition to: “Technical content: Document and information types”

The sole section in this topic is to be added to “Technical content: Document and information type” in the architectural specification.

### Troubleshooting

The troubleshooting document type provides markup for corrective action information such as troubleshooting and alarm clearing. The troubleshooting information type describes a condition or a symptom and finishes with one or more possible causes and their associated remedies. Each remedy is a series of steps, associated with a cause, that attempts to resolve the condition or symptom.

## Changes to the language specification

The language specification requires new topics for each of the new elements introduced by the troubleshooting topic.

### **troubleshooting**

The <troubleshooting> element is the top-level element for a troubleshooting topic. Troubleshooting topics document corrective action such as troubleshooting or alarm clearing. Troubleshooting topics begin with a description of a condition that the reader may wish to correct, followed by one or more cause-remedy pairs. Each cause-remedy pair is a potential solution to the trouble described in the condition.

Troubleshooting topics represent the kind of information that users typically consult to fix a problem.

### Contains

The content model of this element may differ based on where it is used. Content model information is located here:

### Contained By

The parents of this element may differ based on where it is used. Content model information is located here:

### Inheritance

- topic/topic troubleshooting/troubleshooting

#### Example

```
<troubleshooting id="resolve" xml:lang="en-us">
    <title>E247 - Memory fault has occurred</title>
    <shortdesc>The system has detected a problem in memory.</shortdesc>
    <troublebody>
        <condition>
            <p>The fault indicator flashes on the front panel, and the error log contains the following message: <msgph>E247 - Memory fault has occurred</msgph></p>
        </condition>
        <troubleSolution>
            <cause>
                <p>Transient memory fault.</p>
            </cause>
            <remedy>
                <responsibleParty>System administrator</responsibleParty>
                <steps>
                    <step>
                        <cmd>Reset the alarm</cmd>
                    </step>
                    <step>
```

```

        <cmd>Monitor the system periodically to see whether
the
            alarm recurs</cmd>
        </step>
    </steps>
</remedy>
</troubleSolution>
<troubleSolution>
<cause>
    <p>Recurring memory fault indicates possible problem
with the
        system memory board. Reseating the board may fix the
        problem.</p>
    </cause>
    <remedy>
        <responsibleParty>Maintenance technician</
responsibleParty>
        <steps

conref="MemoryBoardReseating.dita#MemoryBoardReseating/steps">
        <step>
            <cmd/>
        </step>
    </steps>
</remedy>
</troubleSolution>
<troubleSolution>
<cause>
    <p>Reseating the system memory board did not fix the
problem.
        Replaceing the board may fix the problem.</p>
    </cause>
    <remedy>
        <responsibleParty>Maintenance technician</
responsibleParty>
        <steps

conref="MemoryBoardReplacement.dita#MemoryBoardReplacement/
steps">
        <step>
            <cmd/>
        </step>
    </steps>
</remedy>
</troubleSolution>
</troublebody>
</troubleshooting>

```

## Attributes

### **troublebody**

The <troublebody> element is a container for the main content of the troubleshooting topic. Troubleshooting topics limit the body structure to an optional, single, condition followed by one or more trouble solution combinations.

### **Contains**

The content model of this element may differ based on where it is used. Content model information is located here:

## Contained By

The parents of this element may differ based on where it is used. Content model information is located here:

### Inheritance

- topic/body troubleshooting/troublebody

#### Example

See [troubleshooting.dita](#).

## Attributes

### condition

The <condition> element describes a state that the troubleshooting topic is supposed to remedy. This information helps the user decide whether a troubleshooting topic might contain a remedy for some problem that might be occurring. This section should add to, or clarify, information that already appears in the troubleshooting topic's title and short description. This information should be brief.

### Contains

The content model of this element may differ based on where it is used. Content model information is located here:

## Contained By

The parents of this element may differ based on where it is used. Content model information is located here:

### Inheritance

- topic/section troubleshooting/condition

#### Example

See [troubleshooting.dita](#).

## Attributes

### troubleSolution

The <troubleSolution> element contains a <cause> element and its related <remedy>. The cause may be omitted if it is implicit or if the remedy is not associated with a cause.

### Contains

The content model of this element may differ based on where it is used. Content model information is located here:

## Contained By

The parents of this element may differ based on where it is used. Content model information is located here:

### Inheritance

- topic/section troubleshooting/troubleSolution

#### Example

See [troubleshooting.dita](#).

## Attributes

### **cause**

The <cause> element describes a potential source of the problem described in the <condition> element, the topic <title> element, or the <shortdesc> element. This information should be brief.

## Contains

The content model of this element may differ based on where it is used. Content model information is located here:

### Contained By

The parents of this element may differ based on where it is used. Content model information is located here:

## Inheritance

- topic/section troubleshooting/cause

### Example

See [troubleshooting.dita](#).

## Attributes

### **remedy**

The <remedy> element contains one or more steps that are a potential solution for the problem described in the <condition> element, the topic <title> element, or the <shortdesc> element. Typically, a <remedy> will be preceded by a <cause>.

## Contains

The content model of this element may differ based on where it is used. Content model information is located here:

### Contained By

The parents of this element may differ based on where it is used. Content model information is located here:

## Inheritance

- topic/section troubleshooting/remedy

### Example

See [troubleshooting.dita](#).

## Attributes

### **responsibleParty**

A <responsibleParty> element identifies the party responsible for performing a remedy procedure.

## Contains

The content model of this element may differ based on where it is used. Content model information is located here:

### Contained By

The parents of this element may differ based on where it is used. Content model information is located here:

**Inheritance**

- topic/p troubleshooting/responsibleParty

**Example**

See *troubleshooting.dita*.

**Attributes**

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