

**Displaying Discussion Threads
on WebCenter Pages**

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A discussion service is a very efficient collaboration tool that allows users to exchange ideas organized by topics and threads of related messages. The discussion service manages categories and forums. Users can log in to the discussion service, drill down to a forum, and then post a new message or reply to an existing message. A new message starts a thread, and replies to the original message are added to the thread.

Oracle WebCenter 10.1.3.2 provides a discussion service, which is powered by the award-winning Jive Software Forums. This technical note demonstrates how to display threads of Oracle WebCenter Discussions forums on Oracle WebCenter application pages.

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1. Overview

Oracle WebCenter Discussions provides various RSS feeds for accessing Discussions threads. The feed we use in our example application publishes a list of threads for a specific forum. The example reads and digests the feed, displaying information about the threads. In this paper, we use a URL data control to digest the RSS feed. There are other approaches for digesting RSS feeds such as using OmniPortlet, which is a prebuilt portlet that can read an XML data source and display its content. Click [here](#) to view a demonstration of this approach.

To build the example described in this paper, you need to download JDeveloper 10.1.3.3. The sample files used in the example are contained in the [RSSDemoFiles.zip](#) archive, which you can download and unzip. In our example, we unzipped the file to the C drive, where it created the C:\RSSDemo\XML subdirectory. You can also download the completed JDeveloper application ([RSSDemoApp.zip](#)).

To test the example application, you also need to access a discussion service. You can install Oracle WebCenter Discussions or access an existing Jive forum. Oracle uses Jive to run OTN Forums. We will use one of the OTN forums for testing the application.

Figure 1 shows the completed application page.

MyOracle Forums : Thread List - ADF Faces (JSF Tech/ADFv)		Replies
Select	Title	
<input type="radio"/>	How to implement query panel for searching columns coming from child/detail	1
<input type="radio"/>	Problem with unicode characters	1
<input type="radio"/>	build 4502: WebApp within ADF Library JAR File	2
<input type="radio"/>	java.lang.NullPointerException: ADF_FACES-60032: Could not find ExtendedRender	2
<input type="radio"/>	ADF custom converter problem	3
<input type="radio"/>	bounded task flow: search + creation flow	0
<input type="radio"/>	How to expand all nodes of the af:tree/af:treetable at the beginning	4
<input type="radio"/>	Using JSTL functions like fn:contains in JSF / Trinidad	1
<input type="radio"/>	JSF RENDER_RESPONSE and JMX Calls in initializeData	1
<input checked="" type="radio"/>	Best way to set the height in a treetable	5

Best way to set the height in a treetable

I have a treetable that contains a small number of top-level/root nodes but a large number of subnodes. The result is that on default expansion I see

[More ...](#)

Figure 1. The Completed Application

On the left side of the page is an ADF table. The title of the table shows the selected forum's name. Each row displays a thread name and the number of replies in that thread. Other information is available, but we chose not to display it in this example. The area on the right displays the selected thread's title and the beginning of the initial message in the thread. When the user clicks any radio button, the page is refreshed to display the selected thread's message. Clicking the thread title or the **More** link in the message opens the thread in a new browser window.

2. About the URL Service Data Control

The URL Service data control is a special data control that provides access to information represented in XML documents. Such documents are often accessed on the Web by using the HTTP protocol.

When creating the data control for our example, you will provide a URL to an OTN forum, which returns an XML document. The URL we use in this example is:

<http://myforums.oracle.com/jive3/rss/rssthreads.jsps?forumID=1565>

Here is a shortened example of the XML document returned by the URL:

```

<?xml version="1.0" encoding="UTF-8"?>
<rss version="2.0"
  xmlns:jf="http://www.jivesoftware.com/xmlns/jiveforums/rss">
  <channel>
    <title>
      MyOracle Forums : Thread List - ADF Faces (JSF Tech/ADFv)
    </title>
    <link>http://myforums.oracle.com/jive3</link>
    <description>List of forum threads</description>
    <language>en</language>
    <generator>
      Jive Forums Enterprise 4.1.2 b (www.jivesoftware.com)
    </generator>
  </channel>

```

```

<pubDate>Tue, 01 Jan 2008 14:20:21 -0700</pubDate>
<item>
  <title>Problem with unicode characters</title>
  <pubDate>Tue, 01 Jan 2008 14:20:21 -0700</pubDate>
  <item>
    <title>Problem with unicode characters</title>
    <link>
      http://myforums.oracle.com/jive3/thread.jsps?threadID=185669
    </link>
    <description>
      <![CDATA[Hi . . . code for]]>
    </description>
    <jf:creationDate>
      Mon, 31 Dec 2007 01:50:03 -0700
    </jf:creationDate>
    <jf:modificationDate>
      Mon, 31 Dec 2007 01:52:10 -0700
    </jf:modificationDate>
    <jf:messageCount>2</jf:messageCount>
    <jf:author>sireesha.patibandla@oracle.com</jf:author>
    <jf:replyCount>1</jf:replyCount>
  </item>
  <item>
    <title>build 4502: WebApp within ADF Library JAR File</title>
    <link>
      http://myforums.oracle.com/jive3/thread.jsps?threadID=117156
    </link>
    <description>
      <![CDATA[How do I . . . and]]>
    </description>
    <jf:creationDate>
      Tue, 01 May 2007 19:04:21 -0600
    </jf:creationDate>
    <jf:modificationDate>
      Sun, 30 Dec 2007 22:41:57 -0700
    </jf:modificationDate>
    <jf:messageCount>3</jf:messageCount>
    <jf:author>hyun-sik.byun@oracle.com</jf:author>
    <jf:replyCount>2</jf:replyCount>
  </item>
</channel>
</rss>

```

The document is an example of an RSS 2.0-formatted feed. You can learn more about this format at the RSS Advisory Board site, <http://www.rssboard.org/rss-specification>.

The RSS 2.0 specification allows vendor-specific extensions. In the XML document shown above, the extensions are evident in the “jf” namespace defined at the beginning of the XML document and the “jf” elements throughout the document. Jive Software specified these additional elements.

In order to extract the individual elements, the URL Service data control must understand the format of the XML document. When creating the data control, you specify an XML schema definition that describes the structure of the XML document. For your added information, we have provided a fairly complete RSS 2.0 schema definition in the RSSDemoFiles.zip archive, but we will follow a different approach in this example.

A useful feature of the URL Service data control is that it can apply a transformation on the XML document before analyzing it and extracting the information. We provide a simple XML style sheet,

which selects only the information required for this example. The RSSdigest.xsl file, which is shown below, is included in the downloaded archive.

```
<?xml version="1.0" encoding="UTF-8"?>
<xsl:stylesheet version="1.0"
  xmlns:xsl="http://www.w3.org/1999/XSL/Transform"
  xmlns:jf="http://www.jivesoftware.com/xmlns/jiveforums/rss">
  <xsl:output method="xml" indent="yes"/>

  <xsl:template match="/rss/channel">
    <channel>
      <title><xsl:value-of select="./title"/></title>
      <xsl:apply-templates select="item"/>
    </channel>
  </xsl:template>

  <xsl:template match="item">
    <item>
      <xsl:attribute name="id">
        <xsl:value-of select="position()"/>
      </xsl:attribute>
      <link><xsl:value-of select="./link"/></link>
      <title><xsl:value-of select="./title"/></title>
      <description>
        <xsl:value-of select="./description"/>
      </description>
      <date><xsl:value-of select="./jf:creationDate "/></date>
      <author><xsl:value-of select="./jf:author"/></author>
      <replies><xsl:value-of select="./jf:replyCount" /></replies>
    </item>
  </xsl:template>
</xsl:stylesheet>
```

After applying the stylesheet above to the XML example shown earlier, we receive a simpler document:

```
<?xml version="1.0" encoding="UTF-8"?>
<channel>
  <title>
    MyOracle Forums : Thread List - ADF Faces (JSF Tech/ADFv)
  </title>
  <item id="1">
    <link>
      http://myforums.oracle.com/jive3/thread.jspa?threadID=185669
    </link>
    <title>Problem with unicode characters</title>
    <description>
      <![CDATA[Hi . . . code for]]>
    </description>
    <date>Mon, 31 Dec 2007 01:50:03 -0700</date>
    <author>sireesha.patibandla@oracle.com</author>
    <replies>1</replies>
  </item>
  <item id="2">
    <link>
      http://myforums.oracle.com/jive3/thread.jspa?threadID=117156
    </link>
    <title>build 4502: WebApp within ADF Library JAR File</title>
```

```

<description>
  <![CDATA[How do I . . . and]]>
</description>
<date>Tue, 01 May 2007 19:04:21 -0600</date>
<author>hyun-sik.byun@oracle.com</author>
<replies>2</replies>
</item>
</channel>

```

Notice that we removed the Jive Software namespace, retained only some elements of the items, and (for convenience) added a counter as the id attribute of the item.

We still need to provide an XMLS schema definition that describes the transformed XML document, but the schema is much easier to create because the transformation produces only those elements we want to present in the result. Here is the XML schema, which you can find in the RSSdigest.xsd file:

```

<?xml version="1.0" encoding="windows-1252" ?>
<xsd:schema xmlns:xsd="http://www.w3.org/2001/XMLSchema"
  version="2.0.1.10">
  <xsd:element name="channel" type="tChannel" />
  <xsd:complexType name="tChannel">
    <xsd:sequence>
      <xsd:element name="title" type="xsd:string"/>
      <xsd:element name="item" type="tItem" minOccurs="0"
        maxOccurs="unbounded"/>
    </xsd:sequence>
  </xsd:complexType>
  <xsd:complexType name="tItem">
    <xsd:sequence>
      <xsd:element name="link" type="xsd:anyURI"/>
      <xsd:element name="title" type="xsd:string"/>
      <xsd:element name="description" type="xsd:string"/>
      <xsd:element name="date" type="tRfc822FormatDate"/>
      <xsd:element name="author" type="xsd:string"/>
      <xsd:element name="replies" type="xsd:nonNegativeInteger"/>
    </xsd:sequence>
    <xsd:attribute name="id" type="xsd:positiveInteger"/>
  </xsd:complexType>
  <xsd:simpleType name="tRfc822FormatDate">
    <xsd:restriction base="xsd:string">
      <xsd:pattern
value="((Mon)|(Tue)|(Wed)|(Thu)|(Fri)|(Sat)|(Sun)), *)?\d\d?
+((Jan)|(Feb)|(Mar)|(Apr)|(May)|(Jun)|(Jul)|(Aug)|(Sep)|(Oct)|(Nov)|
Dec)) +\d\d(\d\d)? +\d\d:\d\d(:\d\d)? +([+|-
]?\d\d\d\d)|(UT)|(GMT)|(EST)|(EDT)|(CST)|(CDT)|(MST)|(MDT)|(PST)|(PDT
)|\w"/>
    </xsd:restriction>
  </xsd:simpleType>
</xsd:schema>

```

A graphical representation of this schema is shown in Figure 2.

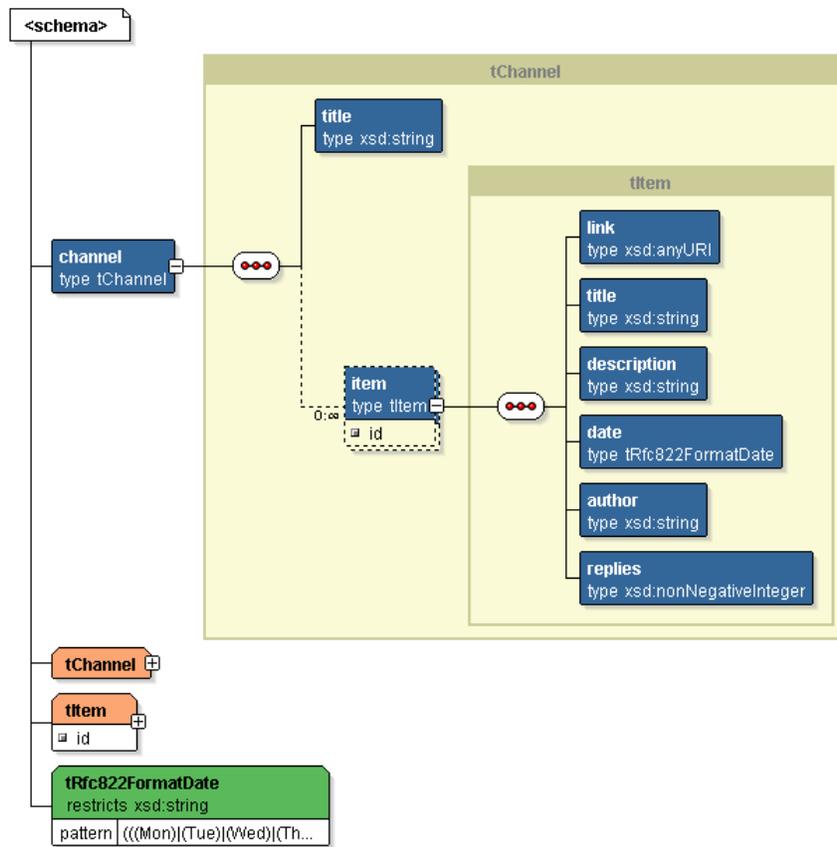


Figure 2. Graphical Representation of the Schema

3. Create the WebCenter Application and a Data Control

Start JDeveloper 10.1.3.3 and create a new application called RSSDemo. Select the WebCenter template, specify the directory, and provide `rssdemo` as the package prefix.

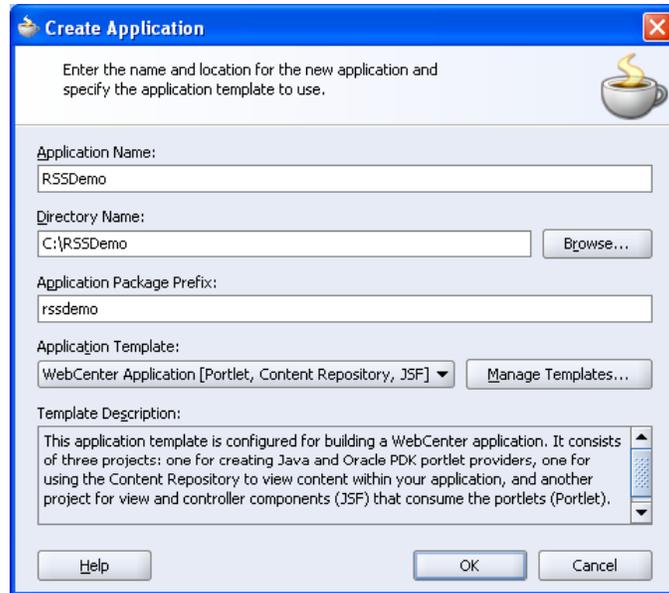


Figure 3. Create a New WebCenter Application

Next we create the URL Service data control. It is good practice to separate the data control definition from its usage. For this reason, we will create the data control in the Model project, not the ViewController project, which is where the user interface will be created.

In the Application Navigator, right click the **Model** project and select **New**. In the New Gallery, choose **All Technologies** from the Filter By list because URL Service data controls are not displayed within the scope of this project. Expand the **Business Tier** node, select **Web Services**, and then select the **URL Service Data Control** item. Click **OK**.

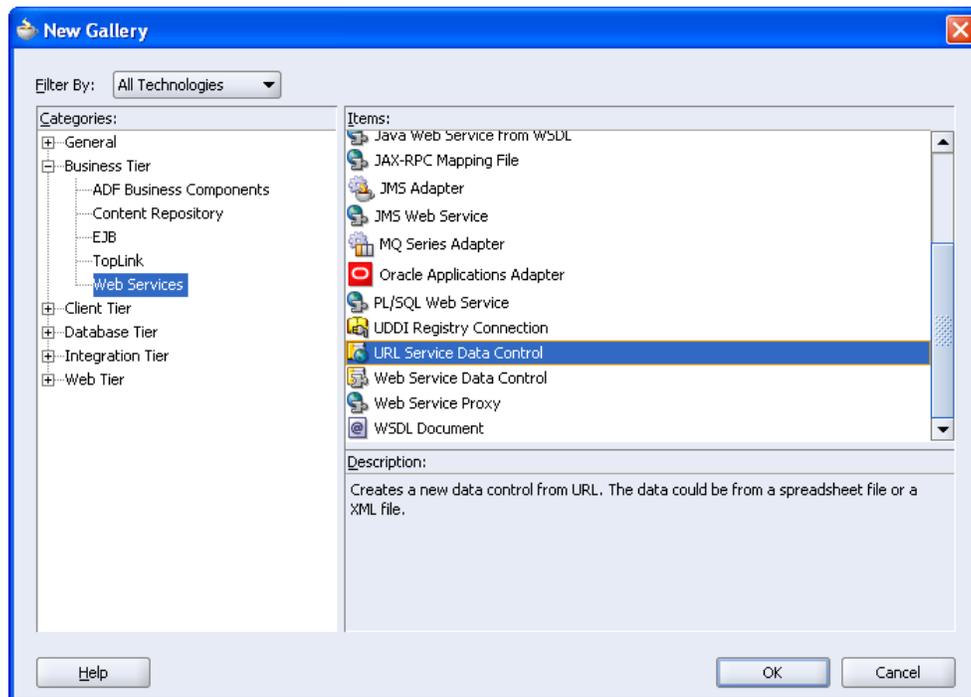


Figure 4. New Content Repository Data Control

In the Data Control Wizard, name the data control `DiscussionsDataControl`. Ensure that **Create New Connection** is selected in the Connection attribute and click **Next**. A new connection will be created for this data control.

In the Connection window, name the connection `DiscussionsConnection`, set URL Endpoint to `http://myforums.oracle.com/jive3/rss/rsstheads.jspa`, and set Source to `?forumID=##forumID##`. Using `##forumID##` provides the flexibility to change the forum ID at run time, although we won't use this feature in our example. Click **Next**.

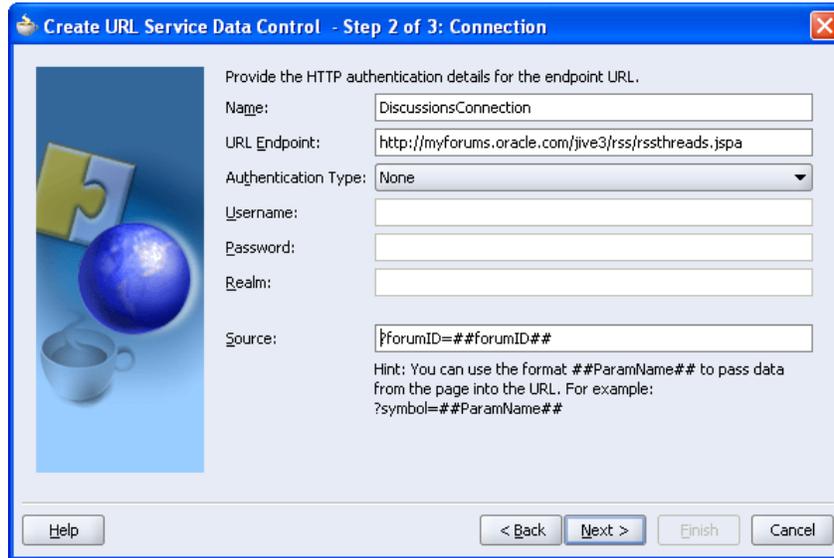


Figure 5. Providing Authentication Details in the Connection Wizard

In the next step, provide 1565 as the default value of the forumID parameter. Click **Next**.

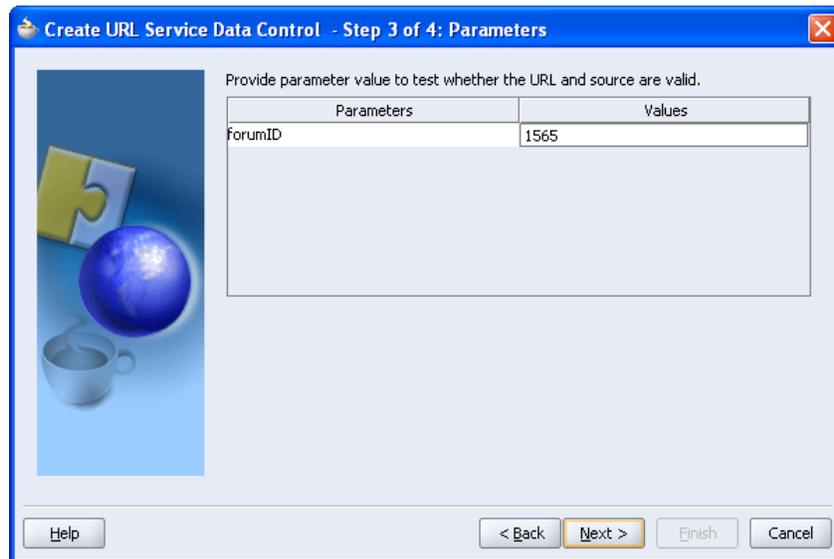


Figure 6. Providing a Default Forum ID

In the Data Format window, select **XML** for the data format and specify the following XML schema and XSLT translation files, which we discussed earlier:

XSD URL = c:\RSSDemo\XML\RSSdigest.xsd
XSL URL = c:\RSSDemo\XML\RSSdigest.xsl

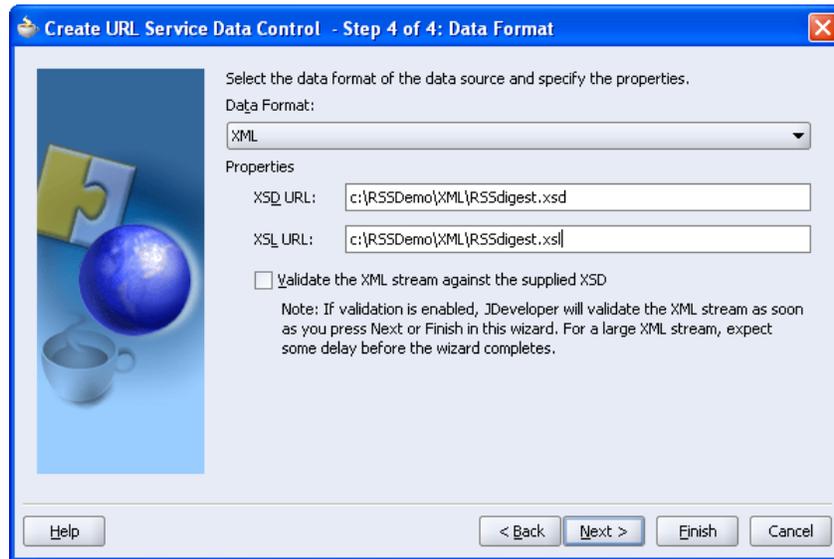


Figure 7. XML Data Format

Click **Finish**.

In the Data Control Palette, you can see the new data control. Expand **DiscussionsDataControl** to reveal the structure of the data control. (To display the Data Control Palette, select **View > Data Control Palette** from the main menu.)

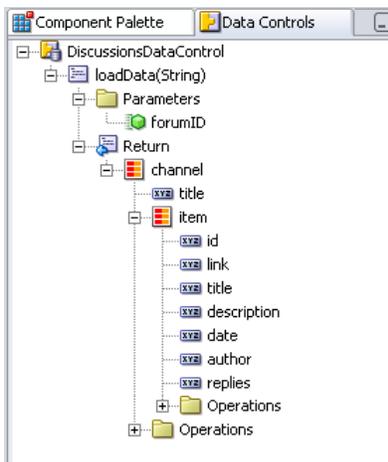


Figure 8. Structure of the URL Service Data Control

We will use the channel title to display the forum name and the item node to display the individual threads.

4. Create the Application Page

Double-click the **ViewController** project to open the Project Properties window. Select the **J2EE Application** node and shorten the J2EE Web Context Root to RSSDemo. This simplifies the URL to access the application page.

To add a new JSF page to this project, right-click **ViewController** and from the New Gallery select **Web Tier > JSF** category. Choose the **JSF JSP** item. In the Create JSF JSP Wizard, enter `threads.jspx` in the File Name field and select the **JSP Document** option.

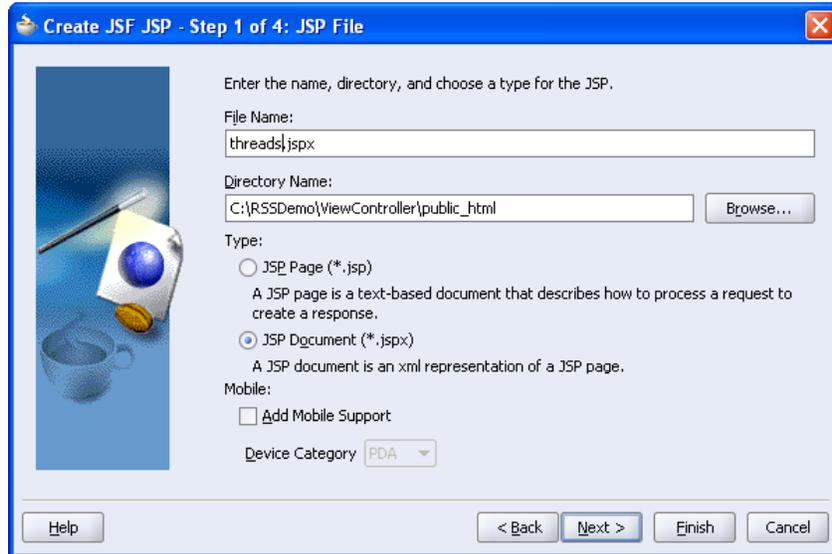


Figure 9. Create a New JSF Page

In the next wizard step, select the **Do Not Automatically Expose UI Components in a Managed Bean** option. In the Tag Libraries step, make sure that the following libraries are selected for the page:

- ADF Faces Components
- ADF Faces HTML
- JSF Core
- JSF HTML

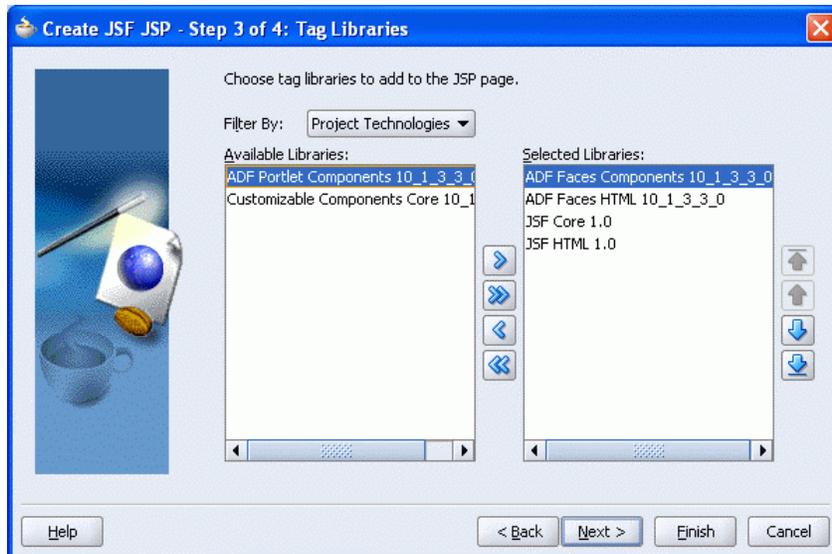


Figure 10. Select Required Tag Libraries

Click **Finish**.

In this example, we use layout elements from the ADF Faces HTML Component Palette to create a table with a single row and two columns. Drag a **TableLayout** component and drop it on the empty page. Drop a **RowLayout** on the table component (use the Structure pane, which gives you more control than the visual editor provides over the placement of a component), and then drop two **CellFormat** components on the row component. Figure 11 shows how the page looks in the Structure pane:

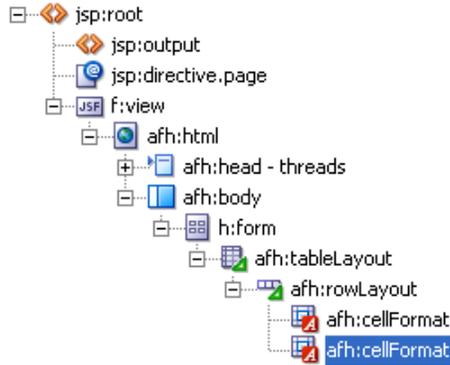


Figure 11. Structure Pane Showing the Page

Next we create the table that will be displayed on the left side of the page. In the Data Control Palette, expand **DiscussionsDataControl**. Drag the **Return > channel > item** node onto the first **cellFormat** node in the Structure pane. Choose **ADF Read-only Table** from the Create context menu.

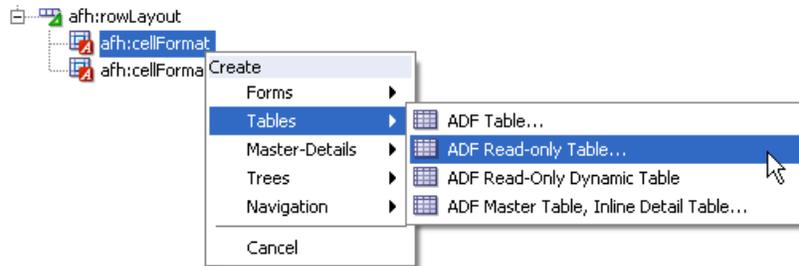


Figure 12. Drop as ADF Read-only Table

Because the loadData operation requires a parameter, the Action Binding Editor opens next. Define the forumID as 1565.

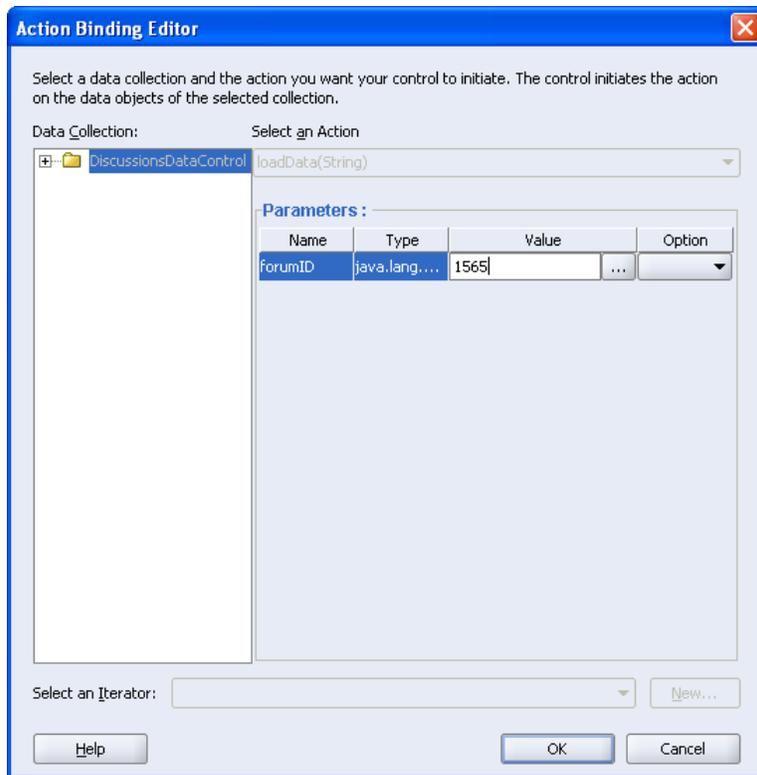


Figure 13. Configure forumID Parameter

When the Edit Table Columns wizard window opens, delete all the columns except **title** and **replies**. Select the **Enable Selection** checkbox.

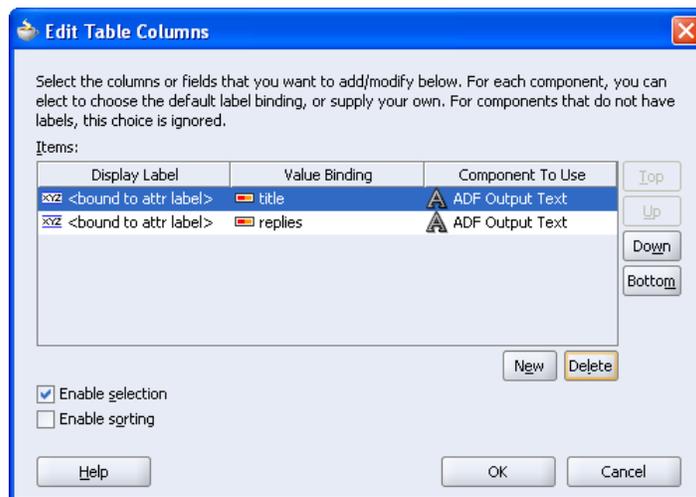


Figure 14. Configure Table Columns and Behavior

Drop an **OutputText** component from the ADF Faces Core Palette on the second **CellFormat** component. Figure 15 shows how the resulting page looks in Design mode.

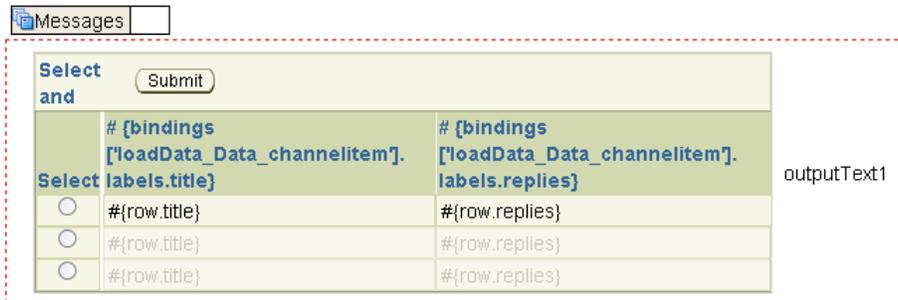


Figure 15. Page with Selectable Table and OutputText

We can delete the Submit button because we will define an automatic submit. Click the **Submit** button to select it and press **Delete**.

To set autosubmit on the radio buttons, click any of the radio buttons. Notice in the Structure pane that the **af:tableSelectOne** node is now selected.

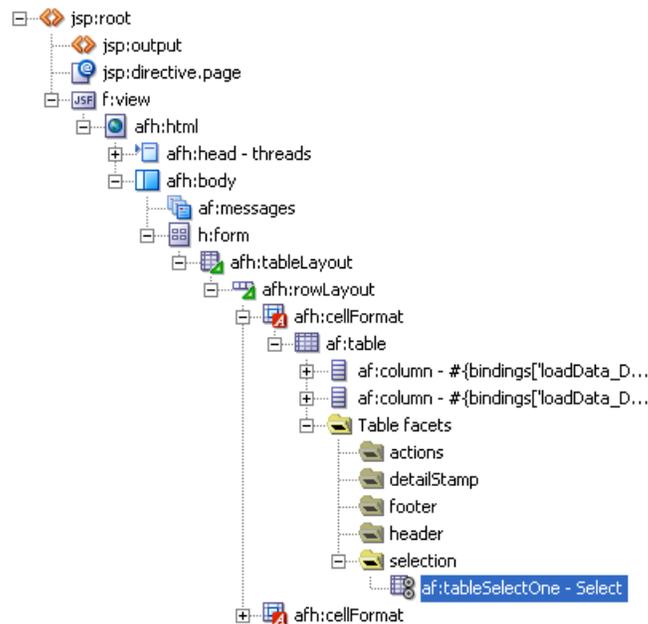


Figure 16. Selection Facet

In the Property Inspector, delete the value in the Text property and set AutoSubmit to `true`.

To give the table a unique, self-descriptive ID, select the `af:table` node, and set its Id property to `threads`.

Before we test the application, let's make the OutputText component in the second cell display the description column in the current row of the table. Select the **OutputText** component in the second cellFormat component and in the Property Inspector, bind its Value property to

```
#{bindings.loadData_Data_channelitem.description}.
```

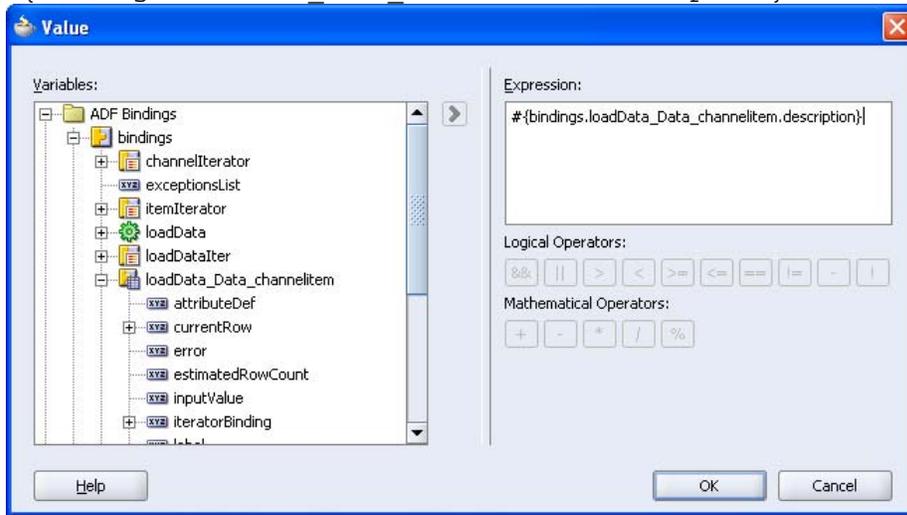


Figure 17. Bind OutputText Value

Because the text in the discussion message may contain HTML tags, change the OutputText's Escape property to false.

Finally, select the **CellFormat** component surrounding this OutputText and change the PartialTriggers property to threads, which is the identifier for the ADF table on the page. The source of this part of the page looks like this:

```
<afh:cellFormat partialTriggers="threads">
  <af:outputText
    value="#{bindings.loadData_Data_channelitem.description}"
    escape="false"/>
</afh:cellFormat>
```

Run the page and test the application at this stage. Select various threads. Figure 18 shows a sample page.

Select	title	replies
<input type="radio"/>	Problem with unicode characters	1
<input type="radio"/>	build 4502: WebApp within ADF Library JAR File	2
<input type="radio"/>	java.lang.NullPointerException: ADF_FACES-60032:Could not find ExtendedRender	2
<input checked="" type="radio"/>	ADF custom converter problem	3
<input type="radio"/>	bounded task flow: search + creation flow	0
<input type="radio"/>	How to expand all nodes of the af:tree/af:treetable at the beginning	4
<input type="radio"/>	Using JSTL functions like fn:contains in JSF / Trinidad	1
<input type="radio"/>	JSF_RENDERER_RESPONSE and JMX Calls in initializeData	1
<input type="radio"/>	Best way to set the height in a treetable	5
<input type="radio"/>	Retain Shuttle Values	3

I am helping a client who wants to perform custom conversion on input for a date field. I fixed the custom converter they wrote so that it works

Figure 18. Unformatted Result Page

All the functional pieces of our example are in place, but we need to format the page to achieve a pleasanter layout.

Display more information for the current thread

On the right side of the page, we display the thread's description in a simple `OutputText` component. Let's add a border, display the title, and add a link to view the complete thread, as shown below:

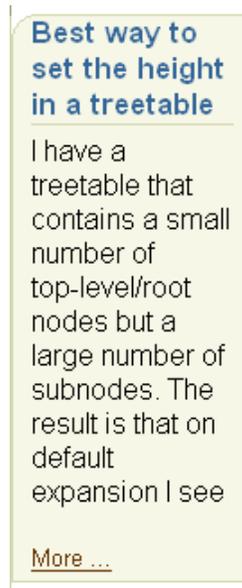


Figure 19. More About the Current Thread

Drag a **PanelBox** on the second **CellFormat** component, and then drag the existing `OutputText` into this `PanelBox`. To display the thread's title, select the **PanelBox** and change its text property to `#{bindings.loadData_Data_channelitem.title}`, which is the title of the currently selected element in the table.

Drag a new **OutputText** onto the **PanelBox**, and delete the **Value** property. This will result an empty line after the description. Drag a **GoLink** onto the `PanelBox`, and then change its text property to `More ...` and its destination property to `#{bindings.loadData_Data_channelitem.link}`.

Note: You can change a component's attribute by selecting it in the Structure pane, then selecting the appropriate property in the Property Inspector pane and entering the new value. However, there is a known issue with specifying Expression Language (EL) in the Destination property of a `GoLink` component: the Property Inspector does not accept an expression such as `#{bindings.loadData_Data_channelitem.link}`. So, to make the modification manually, go to the Source mode of the visual editor, locate the `<af:goLink...>` tag, and insert the attribute `destination="#{bindings.loadData_Data_channelitem.link}"`.

The source of the resulting page fragment looks like this:

```
<afh:cellFormat partialTriggers="threads">
  <af:panelBox text="#{bindings.loadData_Data_channelitem.title}">
    <af:outputText
      value="#{bindings.loadData_Data_channelitem.description}"
      escape="false"/>
    <af:outputText/>
    <af:goLink text="More ..."
      destination="#{bindings.loadData_Data_channelitem.link}"/>
  </af:panelBox>
```

```
</afh:cellFormat>
```

Add a forum title and change the thread title to a link

We would like to show the title of the forum being displayed. In the Structure pane, right-click the **af:table** node and select **Facets – Table > Header** from the context menu. The new facet is now exposed in the Structure pane.

In the Data Control Palette, drag and drop the channel's **title** on the header facet created in the previous step. Choose **Texts > ADF Output Text** from the Create context menu.



Figure 20. Create Table Header

In the Structure pane, find the **OutputText** in the first column.

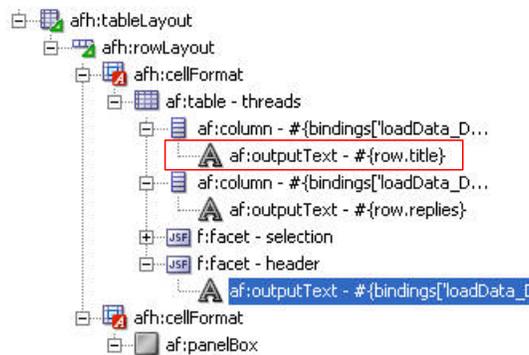


Figure 21. Title Column

Right-click the **OutputText** node and select **Convert** from the context menu. Select **goLink** in the Convert OutputText dialog box. Click **OK** in the Confirm Convert dialog box. Modify the **Text** property of the resulting GoLink component to **#{row.title}**, the **Destination** property to **#{row.link}**, and the **TargetFrame** property to **_blank**.

Modify the **HeaderText** properties of the two columns to display **Title** and **Replies** respectively. Because the replies column contains numeric information, set the column's **formatType** attribute to **number**.

The resulting table tag is shown below. Bold characters indicate the changes described in this paper.

```
<af:table . . . id="threads">
  <af:column sortProperty="title" sortable="false"
    headerText="Title">
    <af:goLink text="#{row.title}" destination="#{row.link}"
      targetFrame="_blank" />
  </af:column>
  <af:column sortProperty="replies" sortable="false"
    headerText="Replies" formatType="number">
    <af:outputText value="#{row.replies}"/>
</af:table>
```

```

</af:column>
<f:facet name="selection">
  <af:tableSelectOne autoSubmit="true"/>
</f:facet>
<f:facet name="header">
  <af:outputText
    value="#{bindings['loadData_Data_channeltitle'].inputValue}"/>
</f:facet>
</af:table

```

Format the thread list table

Align the top of the two cells by setting the Valign property for **RowLayout** to top.

Define sizes for both columns of the table and specify that the table and the content in the columns should fill the available space. The layout control tags are shown below:

```

<afh:tableLayout width="100%">
  <afh:rowLayout valign="top">
    <afh:cellFormat width="30%">
      <af:table . . . width="100%">
        . . .
      </af:table>
    </afh:cellFormat>
    <afh:cellFormat . . . width="*">
      <af:panelBox . . . width="100%">
        . . .
      </af:panelBox> . . .
    </afh:cellFormat>
  </afh:rowLayout>
</afh:tableLayout>

```

Run the page again to see the improved layout. This is the final version of our example.

5. Summary

Oracle WebCenter 10.1.3.2 provides a discussion service, which is powered by the award-winning Jive Software Forums. This technical note has demonstrated how to display threads of an Oracle WebCenter Discussions forum on a Oracle WebCenter application page. There are various approaches for reading and digesting an RSS feed coming from WebCenter Discussions. We chose to use a URL Service data control.

ORACLE FUSION MIDDLEWARE

Oracle WebCenter TechNote

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