

Send Email with Attachments Tutorial

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Overview

The send email with attachments tutorial is used to send email with attachments. This document describes how to create this business process.

Pre-requisites

1. This example assumes familiarity with basic BPEL constructs including BPEL activities, partner links, etc., and basic XPath. Familiarity with the JDeveloper environment for creating and deploying BPEL processes is also assumed.
2. Configure the email server settings for the account 'Default' if it is different from the default values. The 'Default' account is used to send emails. The email server configuration is in the file
`<ORACLE_HOME>\integration\orabpel\system\services\ns_emails.xml`. The following segment from the file show all the parameters that would require configuration, if needed, in bold.

```
<EmailAccount>
  <Name>Default</Name>
  <GeneralSettings>
    <FromName>Oracle BPM</FromName>
    <FromAddress>bpm1@dlsun4254.us.oracle.com</FromAddress>
  </GeneralSettings>
  <OutgoingServerSettings>
    <SMTPHost>dlsun4254.us.oracle.com</SMTPHost>
    <SMTPPort>225</SMTPPort>
  </OutgoingServerSettings>
  <IncomingServerSettings>
    <Server>dlsun4254.us.oracle.com</Server>
    <Port>2110</Port>
```

```

    <Protocol>pop3</Protocol>
    <UserName>bpm1</UserName>
    <Password ns0:encrypted="false"
xmlns:ns0="http://xmlns.oracle.com/ias/pcbpel/NotificationService">welcome</Password>
    <UseSSL>false</UseSSL>
    <Folder>Inbox</Folder>
    <PollingFrequency>1</PollingFrequency>
    <PostReadOperation>
        <MarkAsRead/>
    </PostReadOperation>
</IncomingServerSettings>
</EmailAccount>

```

3. Change the email addresses for the user 'jcooper. If XML-Based JAZN provider is used, these properties can be changed in the file `<ORACLE_HOME>\integration\orabpel\system\services\users-properties.xml`. The following XML segment from the users-properties.xml file shows where the email should be configured.

```

<bpm:BPMUser userName="jcooper" >
  <bpm:properties>
    <bpm:givenName>James</bpm:givenName>
    <bpm:sn>Cooper</bpm:sn>
    <bpm:title>Loan Agent 1</bpm:title>
    <bpm:manager>jstein</bpm:manager>
    <bpm:mail>user3@dlsun4254.us.oracle.com</bpm:mail>
    <bpm:timeZone>GMT-8</bpm:timeZone>
    <bpm:preferredLanguage>en-US</bpm:preferredLanguage>
    <bpm:orclWorkflowNotificationPref>Mail</bpm:orclWorkflowNotificationPref>
  </bpm:properties>
</bpm:BPMUser>

```

4. Please ensure that the BPEL Process Manager is restarted after any of the above changes.

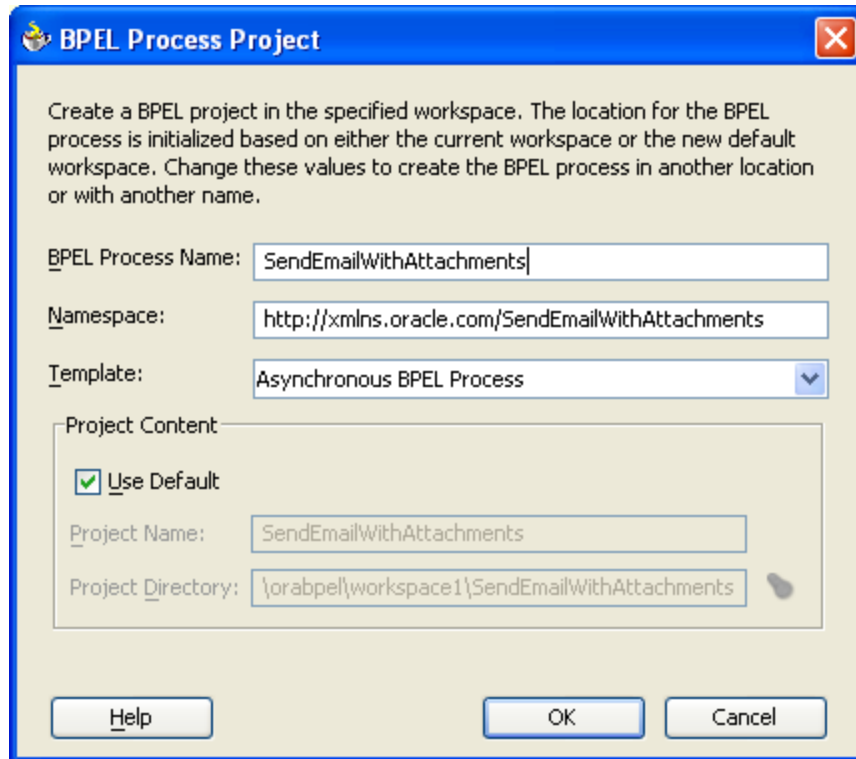
Key Concepts

This example highlights the use of the following key concepts/features.

- Modeling notification in the JDeveloper environment.
- Send emails.
- Send emails with attachments.

Getting Started: Modeling the Process

1. Create a business process called SendEmailWithAttachments.



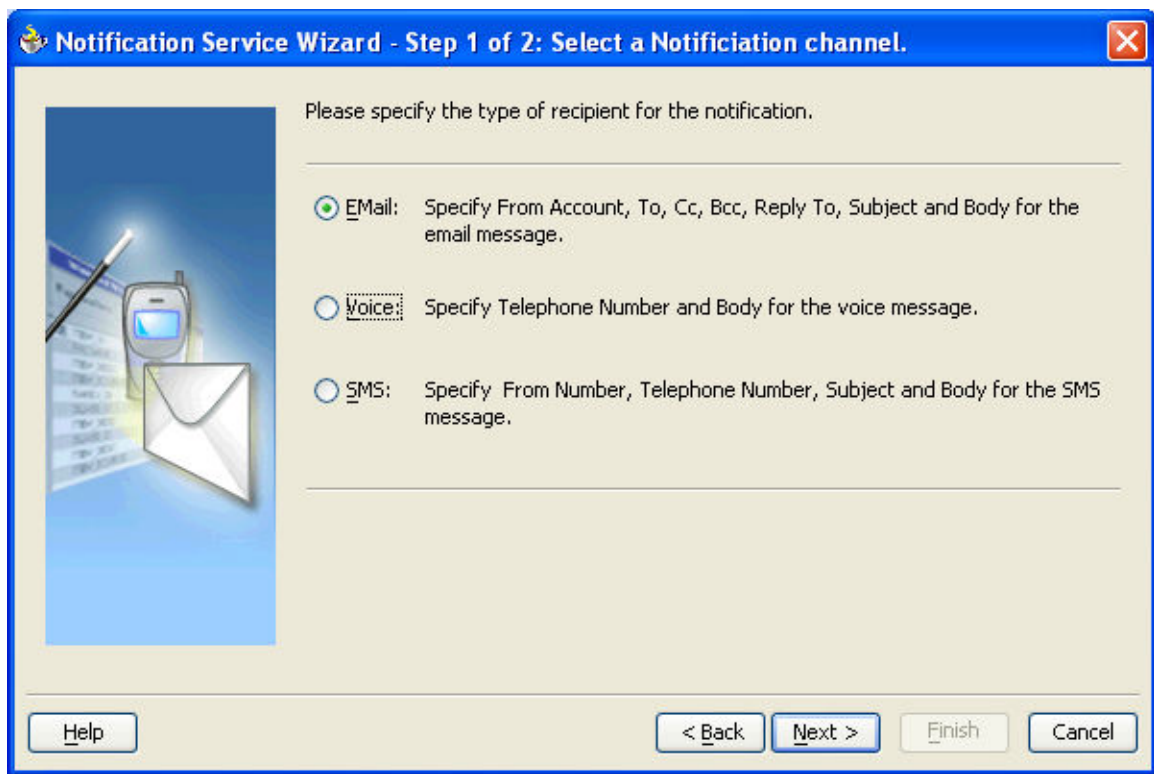
2. In the SendEmailWithAttachments.wsdl, the element ‘SendEmailWithAttachmentsProcessRequest’ as created by default as shown below.

```
<element name="SendEmailWithAttachmentsProcessRequest">
  <complexType>
    <sequence>
      <element name="input" type="string"/>
    </sequence>
  </complexType>
</element>
```

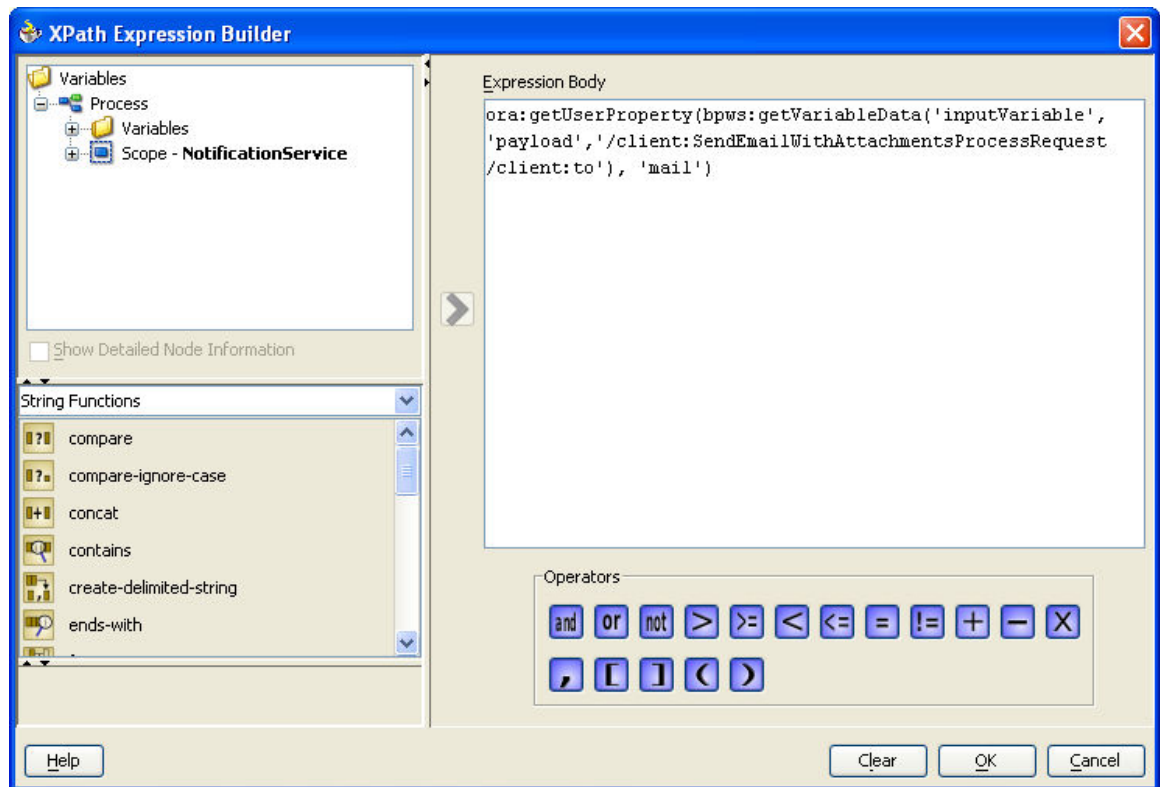
Change the element as follows.

```
<element name="SendEmailWithAttachmentsProcessRequest">
  <complexType>
    <sequence>
      <element name="subject" type="string"/>
      <element name="body" type="string"/>
      <element name="attachmentName" type="string"/>
      <element name="attachmentMimeType" type="string"/>
      <element name="attachmentURI" type="string"/>
    </sequence>
  </complexType>
</element>
```

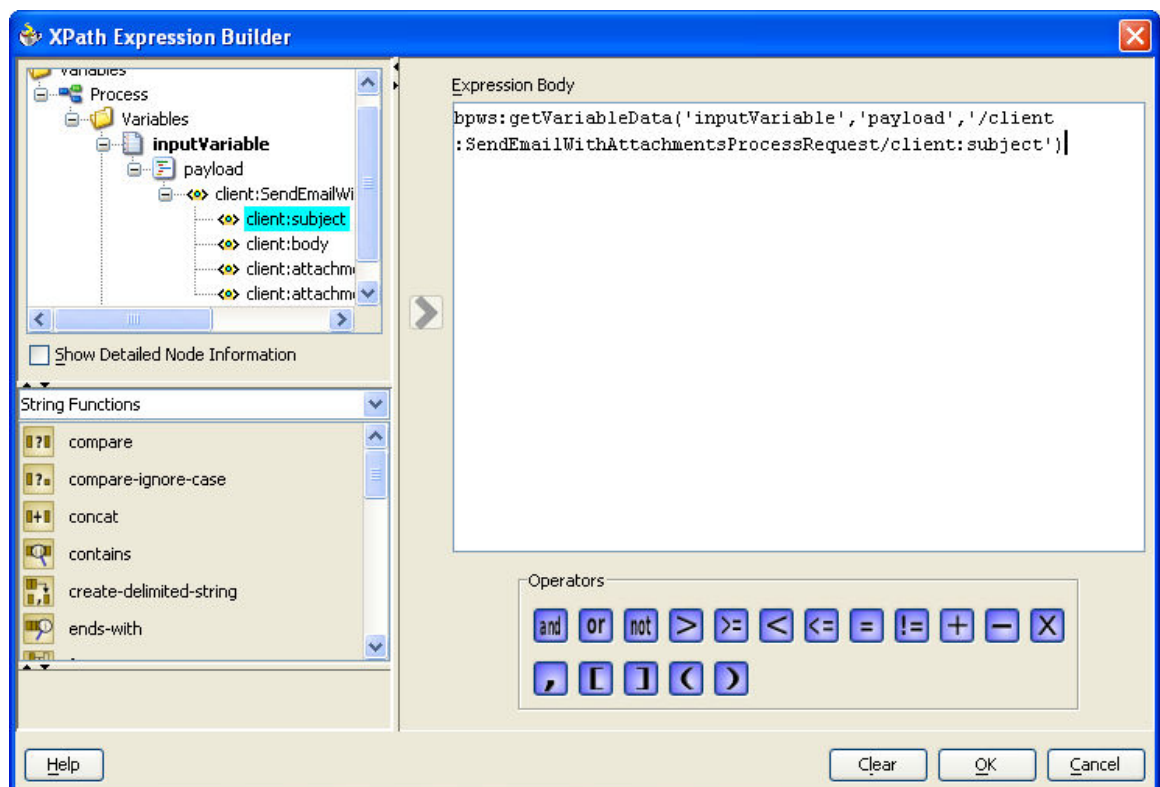
3. Drag and drop a ‘Notification’ activity between the invoke and the receive activities. This brings up the notification wizard. Click Next.
4. In the ‘Select a Notification channel’ page, select ‘Email’ and click next.



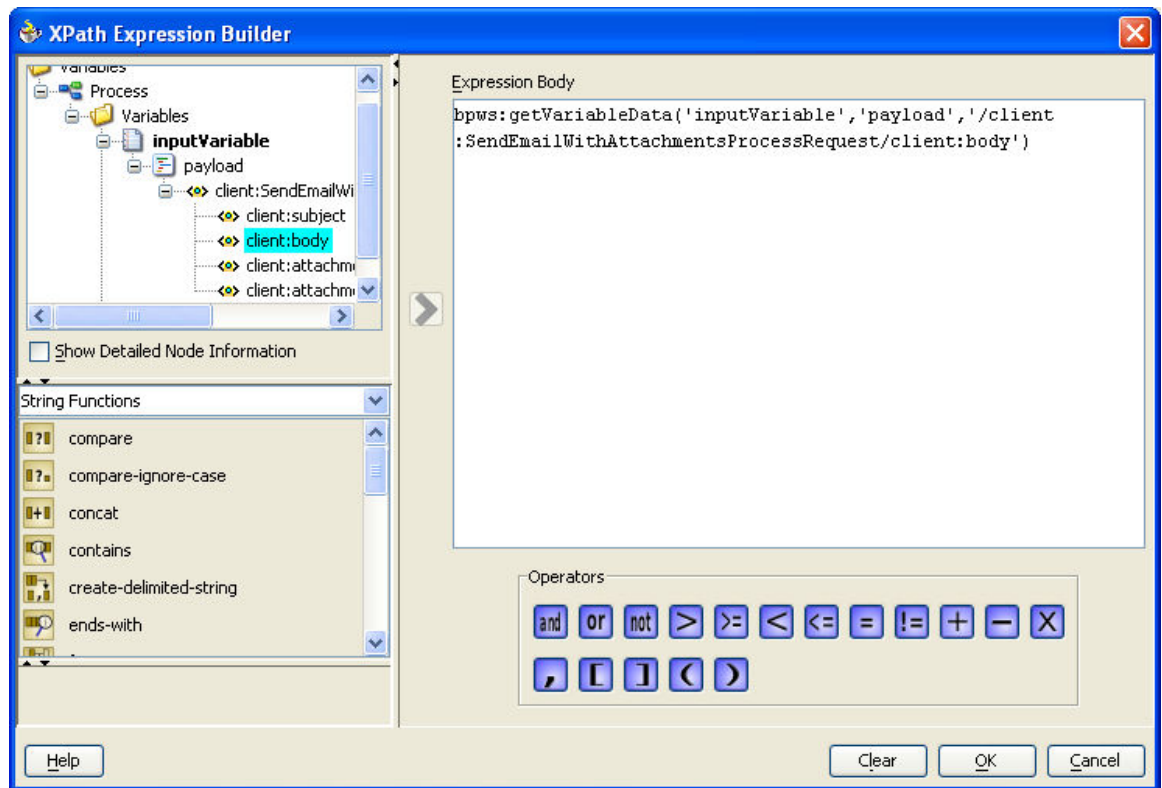
5. In the 'Specify Email parameter' set the following values.
 - a) Leave the 'From Account' as 'Default'.
 - b) For the 'To', click on 'XPath Expression Builder' and set the expression to `ora:getUserProperty(bpws:getVariableData('inputVariable','payload','/client:SendEmailWithAttachmentsProcessRequest/client:to'), 'mail')`. Click 'OK'.



- c) Set the 'Subject' to the 'subject' element of the input message using the XPath Expression Builder.




- d) Set the 'Body' to the 'body' element of the input message using the XPath Expression Builder.



- e) Check the message as 'Multipart message' and set the message has 3 attachments. When an email has multipart messages, the attachments include the body that is set in the wizard. The body set in the wizard is set as the first attachment.

Notification Service Wizard - Step 2 of 2: Specify Email parameters.



From Account: Default

To: `<%ora:getUserProperty(bpws:getVariableData`

Cc:

Bcc:

Reply To:

Subject: `<%bpws:getVariableData('inputVariable','payload`

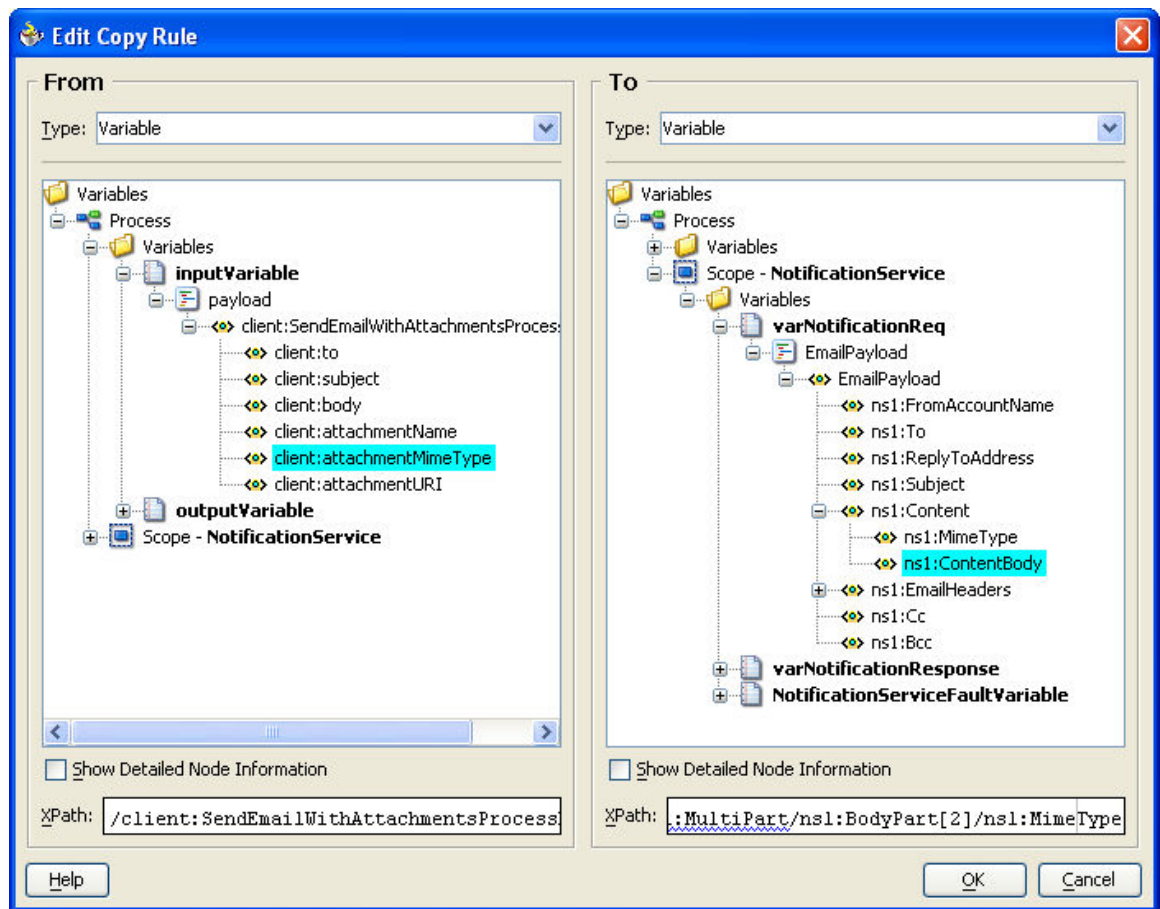
Body: `<%bpws:getVariableData('inputVariable','payload`

Message body can be plain text or HTML

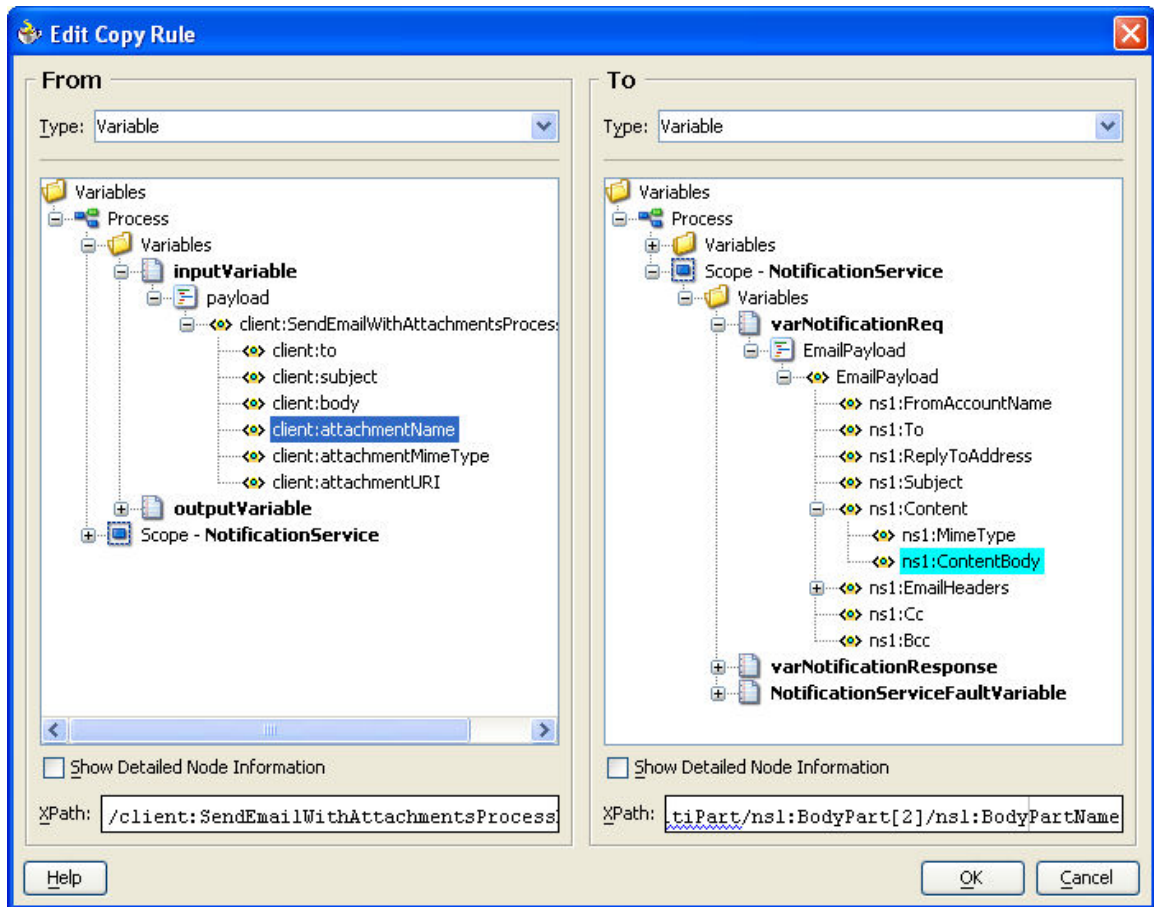
☒ Multipart message with 2 attachments

Help < Back Next > Finish Cancel

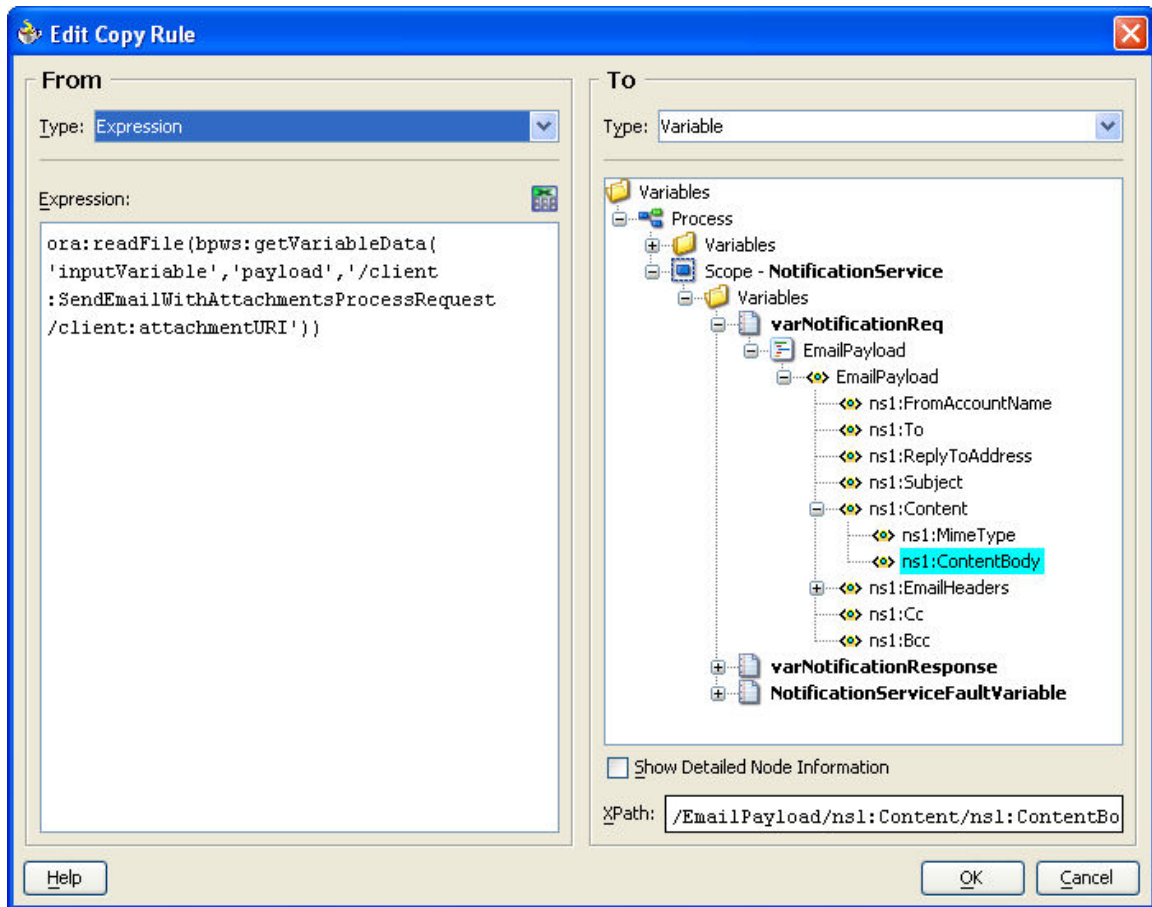
6. Click next and then finish to complete the wizard.
7. Each attachment has 3 attributes: MimeType, BodyPartName and ContentBody. By default, the wizard generates default names, mime types and contents for each of the attachments. The assignment of these attachments has to be changed to set the correct data by modifying the copy rules in the assign activity in the notification scope. The copy rules are grouped for each attachment in the following order (the copy – to constructs are listed for along with it).
 - a. mimeType - `<to variable="varNotificationReq" part="EmailPayload" query="/EmailPayload/ns1:Content/ns1:ContentBody/ns1:MultiPart/ns1:BodyPart[2]/ns1:MimeType"/>`
 - b. name – `<to variable="varNotificationReq" part="EmailPayload" query="/EmailPayload/ns1:Content/ns1:ContentBody/ns1:MultiPart/ns1:BodyPart[2]/ns1:BodyPartName"/>`
 - c. contents – `<to variable="varNotificationReq" part="EmailPayload" query="/EmailPayload/ns1:Content/ns1:ContentBody/ns1:MultiPart/ns1:BodyPart[2]/ns1:ContentBody"/>`
8. Edit the mimeType of the second attachment (the first attachment is the contents set in the wizard) as shown below.



9. Edit the attachment name of the second attachment as shown below.



10. Edit the attachment contents of the second attachment as shown below.



11. The process modeling is complete.

Running the Sample

1. Deploy the SendEmailWithAttachments process from JDeveloper.
2. Login to the BPEL console for your server, select the SendEmailWithAttachments process, and go to the 'initiate' tab.
3. The process has a default message that can be used to initiate the process. The default message sets the email TO to jcooper and the file samplecover.pdf as the email.
4. Check the email address of jcooper, there should be an email with the attachment.

References

1. Notification chapter in the BPEL Process Manager user guide.