



Boundless Integrations

The Boundless Integrations XPath Service provides the ability to execute an XPath expression against ProcessData or PrimaryDocument. Unlike and assign statement, an XPath expression can be passed as a literal to be evaluated again.

Prerequisites:

- Install 3rd Party Vendor JAR: `boundless_integrations_core.jar`. Available free with first Boundless Integrations license
- `BoundlessIntegrations.properties.in`: Available with any Boundless Integrations license (reminder: run `setupfiles(.sh or .cmd)` after placing in the properties directory of each node)
- Make note of any hot fixes currently installed and make sure to have a copy of the jar file available

Installation:

- Download `XPath_1020402.0.0.jar`: After purchasing the XPath Service license, the jar file will be available for download
- Generate, download, and place into the properties directory of each node the `BoundlessIntegrations.properties_xpath_license_ext` file
- Stop B2Bi Node(s)
- Place in a location accessible to each node and run `bin/installService(.sh or .cmd)`
- Reapply latest hot fix (as installing new services will remove any hot fixes)
- If on a cluster environment, perform the previous two steps on all nodes before running `bin/startCluster #` (where # is the node number) starting with Node 1.
- Check `properties/lang/en` directory for `XPath_en.properties` file. If not present, download and copy to that directory. If other languages are available, you may do the same copy to the appropriate language directory for the appropriate language properties file.
- Start B2Bi Node(s)
- Configure at least one XPath Service within B2Bi (see below)

License Update:

- If manually paying for the next year's maintenance, do so.
- After payment has been received (whether automatic or manual), generate, download, and place `BoundlessIntegrations.properties_xpath_license_ext` file into the properties directory of each node.
- Run `bin/setupfile(.sh or .cmd)`.
- Either bounce each node or execute `BNDINT_RefreshCache` Business Process.



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Configure XPath Service:

- Select Default Mode:
 - PrimaryDoc: Execute XPath expression against the Primary Document
 - ProcData: Execute XPath expression against Process Data
- Select Default Append Setting:
 - false: Replace any existing nodes being assigned to
 - true: Always add a new node for each node being assigned to

Workflow Parameters:

- xpathTo#:
 - One node to assign to (i.e. xpathTo1, xpathTo2, etc.) which can be an XPath expression that must evaluate to a string value.
- xpathFrom#:
 - One XPath expression (i.e. xpathFrom1, xpathFrom2, etc.) to evaluate to assign to the corresponding xpathTo#.
- PrimaryDoc Mode Parameters:
 - append
 - xpathTo#
 - xpathFrom#
- ProcData Mode Parameters:
 - append
 - xpathTo#
 - xpathFrom#



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Examples:

PrimaryDoc mode, return one text value:

```
<operation name="XPath Service">
  <participant name="XPathService"/>
  <output message="outmsg">
    <assign to="mode">PrimaryDoc</assign>
    <assign to="append">true</assign>
    <assign to="xpathTo1">CustomerId</assign>
    <assign to="xpathFrom1">/Orders/Header/CustomerId/text()</assign>
    <assign to="." from="*"></assign>
  </output>
  <input message="inmsg">
    <assign to="." from="*"></assign>
  </input>
</operation>
```

The XPath service will return the CustomerId from the Primary Document. This mimics the DocToDOM Built-In B2Bi XPath Function with the trailing XPath expression.

PrimaryDoc mode, return multiple text values:

```
<operation name="XPath Service">
  <participant name="XPathService"/>
  <output message="outmsg">
    <assign to="mode">PrimaryDoc</assign>
    <assign to="append">true</assign>
    <assign to="xpathTo1">CustomerId</assign>
    <assign to="xpathFrom1">/Orders/Header/CustomerId/text()</assign>
    <assign to="xpathTo2">OrderCount</assign>
    <assign to="xpathFrom2">count(/Orders/Order)</assign>
    <assign to="xpathTo3">TotalQuantity</assign>
    <assign to="xpathFrom3">sum(/Orders/Order/Line/Quantity)</assign>
    <assign to="xpathTo4">TotalValue</assign>
    <assign to="xpathFrom4">sum(/Orders/Order/Line/Amount)</assign>
    <assign to="." from="*"></assign>
  </output>
  <input message="inmsg">
    <assign to="." from="*"></assign>
  </input>
</operation>
```



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The XPath service will return the CustomerId, total order count, total quantity, and total value from the Primary Document. This mimics several DocToDOM Built-In B2Bi XPath Function with the trailing XPath expression.

PrimaryDoc mode, an order:

```
<operation name="XPath Service">
  <participant name="XPathService"/>
  <output message="outmsg">
    <assign to="mode">PrimaryDoc</assign>
    <assign to="append">>true</assign>
    <assign to="xpathTo1">CurrentOrder</assign>
    <assign to="xpathFrom1" from="concat ('/Orders/Order[',
/ProcessData/orderLoop/text(), ', ')></assign>
    <assign to="." from="*"></assign>
  </output>
  <input message="inmsg">
    <assign to="." from="*"></assign>
  </input>
</operation>
```

The XPath service will return the entire Order in the orderLoop position from the Primary Document. The xpathFrom1 value must be assigned as an XPath expression in a normal assign statement to pull in the orderLoop value. The XPath service gets the evaluated value (i.e. "/Orders/Order[1]") and then evaluates it against the Primary Document. The entire Order node in the Primary Document is placed under /ProcessData/CurrentOrder. This allows for a large XML document to be processed in chunks without needing to place the entire document into Process Data. This allows Process Data to remain smaller (as a large Process Data will slow down the time to execute each step).



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ProcData mode, an order:

```
<operation name="XPath Service">
  <participant name="XPathService"/>
  <output message="outmsg">
    <assign to="mode">ProcData</assign>
    <assign to="append">true</assign>
    <assign to="xpathTo1">CustomerId</assign>
    <assign to="xpathFrom1" from="/ProcessData/custXPath/text()" />
    <assign to="." from="*"></assign>
  </output>
  <input message="inmsg">
    <assign to="." from="*"></assign>
  </input>
</operation>
```

Like the PrimaryDoc example, this one sets CustomerId. However, the CustomerId is in Process Data (such as /ProcessData/Orders/Header/CustomerId) and the Process Data node /ProcessData/custXPath points to it. This would be used if a generic process is trying to pull information from different sources.

ProcData mode, xpathTo expression:

```
<operation name="XPath Service">
  <participant name="XPathService"/>
  <output message="outmsg">
    <assign to="mode">ProcData</assign>
    <assign to="append">true</assign>
    <assign to="xpathTo1">concat("orderId",orderLoop/text())</assign>
    <assign to="xpathFrom1"
      from="/ProcessData/CurrentOrder/Order/OrderId/text()" />
    <assign to="." from="*"></assign>
  </output>
  <input message="inmsg">
    <assign to="." from="*"></assign>
  </input>
</operation>
```

This example shows how the node being assigned a value can be dynamically built also. In this example, the list of orders is being built with unique node names (i.e. orderId1, orderId2, etc.).



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Troubleshooting:

- XPath service throws an exception.
 - Check system.log for details. Open an incident with Boundless Integrations if needed.
- xpathTo# node is not created.
 - Check that the xpathTo parameters are numbered sequentially.
 - Check that the xpathTo parameter is either a literal or evaluates to a nonblank value.
- xpathTo# node is empty.
 - Check that a corresponding xpathFrom is defined.
 - Check that the corresponding xpathFrom evaluates to a nonblank value or a nonempty node set.

Support:

Contact Boundless Integrations for any support need. As part of your license, the following support is included at no additional charge:

- Bug fixes
- Installation problems (not including rework of any existing assets)
- Enhancements requests
- General "How Do I" questions

The following services (and any others not explicitly listed above) are available as contract support billed by hour plus any expenses:

- Rework existing business processes/maps/XSLTs
- Custom business processes/maps/XSLTs

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