



Focal Point[®]

RESTful API Reference Manual

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The documentation relating to this product includes:

- Focal Point APM Workspace Deployment Guide
- Focal Point APM Workspace User Guide
- Focal Point Business Rule Development and Usage Guide
- Focal Point Custom Chart Plugin Reference Manual
- Focal Point REST RDF API Reference Manual
- Focal Point RESTful API Reference Manual
- Focal Point Web Services API Reference Manual

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1 Focal Point RESTful API

The RESTful API for Focal Point uses HTTP to send and retrieve XML documents. To understand and use the RESTful API, you must be familiar with the REST principles and with HTTP, XML, and the XML Schema.

The RESTful API for Focal Point is a provisional API. It is not for production use and can change at any time.

You can refer to the REST API examples to learn how to use the APIs for Focal Point. The examples are in Java source files that can be compiled and run. The RESTful API examples are available in Focal Point install directory\apiexamples\RESTAPIExample.zip. An administrator having access to the application server on which Focal Point is installed can provide you with the example package. For more information about the source files and the process to compile the code, see the readme file in the example package.

Setup

The server name part of the resource URI can be configured in the Login or Balancer URL page.

To specify the server name for the resource URI, in Focal Point, from the User menu, select **Administration**. On the Administration page, click **Application > Login Page**. Under Login Page Settings, click the **Edit** icon for Login or Balancer URL, specify the URL, and click the **Save** icon.

Note Make sure that the host name or the server name does not change. A change in the host name can lead to broken links in Focal Point integrated systems that link to the Focal Point resources.

Authentication

The requests to the RESTful API must be authenticated by using HTTP basic authentication. Unless you use HTTPS, the user name and password are sent without encryption.

In HTTP basic authentication, character encoding is not specified for user names and passwords. User names and passwords can include ASCII characters only. You might be able to use ISO-8859-1 characters if the characters are encoded by the client correctly.

Character encoding

The XML that is retrieved from Focal Point uses UTF-8 character encoding.

For XML that is sent to Focal Point, the charset of the Content-Type HTTP header is used, if present. Otherwise, the encoding that is specified in the XML prolog is used. If no prolog is present, the default for the XML is used. The encoding that is used must match any declared encoding. You can use UTF-8 encoding when you communicate with Focal Point and specify UTF-8 encoding in the HTTP header and XML prolog.

Resources overview

The REST XML resources in Focal Point are service, element collections, element and attributes. These are the resource types and example REST API URIs for the resources:

Resource type	Example REST API URI	Description	Supported REST operations
Service document	<code>http://focalpointserver/fp/resources/</code>	The service document has the high level resources for workspace, module, views that a user has access to.	GET
Element collection	<code>http://focalpointserver/fp/resources/workspaces/1/modules/1/elements/</code>	An element collection has the contents of a view or module.	GET POST
Element	<code>http://focalpointserver/fp/resources/workspaces/1/modules/1/elements/1</code>	Element has contents of attributes	GET
Attribute	<code>http://focalpointserver/fp/resources/workspaces/1/modules/1/elements/1/attributes/1</code>	Attribute	GET PUT POST DELETE

Links

The XML representations of Focal Point resources can link to other resources by using the XML element link. The link is similar to the link in the Atom format. For more information, see <http://www.atomenabled.org/developers/syndication/atom-format-spec.php#element.link>.

Mandatory attribute

Link attributes	Description
href	The URI of the referenced resource.

Optional attributes

Link attributes	Description
rel	<p>The rel attribute can have one of the following attributes:</p> <ul style="list-style-type: none">- alternate: An alternate representation of the resource. Example: an HTML page- enclosure: A related resource that might be large and require special handling. Example: a binary file- related: A related resource- self: The resource itself- edit: A reference to a resource that can be edited, which might be the resource itself
title	A human-readable title of the link.
type	The media (MIME) type of the resource.
hreflang	The language of the resource.
length	The size of the referenced resource in bytes.

Service documents

The service document has the high level resources for workspace, module, views that a user has access to. Only users with workspace administrator rights can access modules.

The resource URI for the service document is:

`http://focalpointserver/fp/resources/`

GET method

Accept header

`application/xml`

Response body

```
<fp:service
  xsi:schemaLocation="http://schema.example.com/focalpoint/resources
  http://focalpoint.example.com/fp/dtd/service.xsd"> <fp:workspace>
<fp:title>SmartCloud</fp:title> <fp:alias>625ca8ed-d4c6-40a0-b8a2-
ccc0319726a5</fp:alias> <fp:modules> <fp:collection addable="true">
<fp:title>Elements</fp:title> <fp:alias>0f615fdc-ed3d-4ce5-9eff-
4f9b625986e8</fp:alias> <fp:indexList
  href="http://focalpoint.example.com/fp/resources/workspaces/2/modules/1/ele
  ments/"> <fp:indexTree
    href="http://focalpoint.example.com/fp/resources/workspaces/2/modules/1/ele
    ments/?tree=true"/> <fp:fullList
    href="http://focalpoint.example.com/fp/resources/workspaces/2/modules/1/ele
    ments/?includeAttributes=true"/> <fp:fullTree
    href="http://focalpoint.example.com/fp/resources/workspaces/2/modules/1/ele
    ments/?tree=true&includeAttributes=true"/> </fp:collection>
```

Service document description

Each module and view contains an element collection. You can view the element collection in these ways in the service document:

Link	Visualization
indexList	A list of elements that includes only the title and URI of each element. If a sort at-tribute is defined, the elements are sorted accordingly.
indexTree	A tree structure of elements that includes only the title and URI of each element. The title, but not the URI of folders that are displayed is included.
fullList	A list of elements that includes all at-tribute values for the attributes in the view or module. If a sort attribute is defined, the elements are sorted accordingly.
fullTree	A tree structure of elements that includes the attribute values for the attributes in the view or module.

For details and annotations of the XML format for the service document, see the XML Schema document. The URI for the schema is in the *schemaLocation* XML attribute of the service document.

Element collection

An element collection has the contents of a view or module. The URI for an element collection is available in the service document and the general URI is:

<http://focalpointserver/context/resources/workspaces/1/modules/1/elements/>

The XML representation of the element collection contains a URI for each element in the element collection. Depending on the link that was chosen in the service document, the collection might include attribute values and might be structured as tree or a flat list.

A single element contains all attribute values and contains more details than the collection. The XML format for the element collection is defined by the XML Schema document in the schemaLocation XML attribute. The XML Schema is unique for each view and module, and dynamically reflects the attribute setup of the module or view. The schema might change in these situations:

- an attribute is added, removed, or changed
- a view definition is changed
- a module is renamed

If a collection is an add view or a module, you can add an element to the collection by using POST operation. The body of the request must contain an XML representation of the element. The XML format to use is in the XML Schema for the collection. If the collection is an add view, the contents of the view are in the folders. The folders can be parents when a new element is added.

Note RESTful APIs ignore the filters that are applied in views. All the elements of a view are displayed.

The resource URI for the service document is:

`http://focalpointserver/fp/resources/`

GET method

Use this method to retrieve the collection of elements in a module. You can use the View parameter to filter the elements and attributes.

URL

`https://fpserver.com:9443/fp/resources/workspaces/2/modules/1/elements/.xml`
`?includeAttributes=true&view=14`

Accept header

`application/xml`

Response body

```
<ns:elementCollection
xsi:schemaLocation="https://fpserver.com:9443/fp/namespace/workspaces/2/modules/1/views/14/elements
https://fpserver.com:9443/fp/resources/workspaces/2/modules/1/elements.xsd?
view=14"> <ns:Elements count="1"> <ns:Element> <ns:attributes>
<ns:Element_Information/> <ns:ID></ns:ID> <ns:Title></ns:Title>
<ns:Description></ns:Description> <ns:type_is_a_folder>
</ns:type_is_a_folder> </ns:attributes> <ns:selfLink
href="https://fpserver.com:9443/fp/resources/workspaces/2/modules/1/element
```

```
s/15?view=14"/> <ns:alias>38bfbaaa-6af2-49ed-a6f4-d0cf39704a55</ns:alias>
</ns:Element></ns:Elements> <fp:link
href="https://fpserver.com:9443/fp/resources/workspaces/2/modules/1/element
s/?view=14" rel="alternate"/> <fp:link
href="https://fpserver.com:9443/fp/resources/workspaces/2/modules/1/element
s/?view=14&includeAttributes=true&tree=true" rel="alternate"/> <fp:link
href="https://fpserver.com:9443/fp/resources/workspaces/2/modules/1/element
s/?view=14&tree=true" rel="alternate"/></ns:elementCollection>
```

Supported parameters for the GET method

Parameter	Description
includeAttributes	Set this parameter to true to retrieve the attributes of the elements. Type: Boolean
view	Use this parameter to specify the view ID for retrieving the elements or attributes that are in the view. Type: Integer
filter	This must be used with the view parameter. Use this parameter to pass the filter ID for retrieving elements and attributes based on the filter criteria. Type: Integer
Example	
view=14&filter=1	
tree	Set this parameter to view the element collection in the tree structure Type: Boolean
modifiedSince	Use this parameter to retrieve the element that have changed since a specified date. The following formats are supported. Note: The user can also supply modifiedsince as a parameter.
yyyy-MM-dd'T'HH:mm:ss	
yyyy-MM-dd'T'HH:mm	
yyyy-MM-dd	
yyyy-MM-dd HH:mm:ss	
yyyy-MM-dd HH:mm	
Type: Date or DateTime	

Parameter	Description
	Example
	2013-04-19T15:16:38+05:30
	2009-01-22T12:00:00+01:00
metadata	Set the parameter to <code>schema</code> to retrieve the schema of the element collection's XML document
	Type: String
	Example
	<code>metadata=schema</code>
fields	Use this parameter to pass XPath expression to retrieve specific set of attributes or to filter elements based on specific values of attributes.
	Type: XPath expression
	Example: To retrieve a specific set of attributes
	<code>fields=elementCollection/Element/attributes/ (ID Title Owner)</code>
	Example: To filter elements based on attribute values
	<code>fields=elementCollection/Element/attributes/ (Title contains X OR Status is Approved)</code>
	<code>fields=elementCollection/Element/attributes/ (Title = X Status is Approved)</code>
	<code>fields=elementCollection/Element/attributes/ (Title is X AND Status = Approved)</code>
	<code>fields=elementCollection/Element/attributes/ (Title contains X AND Cost < 100)</code>

Parameter	Description
-----------	-------------

Notes

- Attribute names and the attribute values should be enclosed in single quotes if they contain the following special characters:

(

)

<

>

|

=

If the names or values already contain single quotes (') then they need to be escaped with a backslash as: \'

Example:

```
fields=elementCollection/Element/attributes/('Comments(incl)' contains 'Shift>Technology')
```

- The following characters or character sequences can be used as operators:

=

<

>

is

contains

- Different filtering conditions can be connected using the following connectors (case sensitive):

AND

OR

| (same as OR)

- If you are using the **fields** parameter for filtering the elements, avoid providing **modifiedSince** parameter. Instead use the **fields** parameter with a filtering condition specified on Last Changed Date attribute.
- Only the following types of attributes are supported for specifying the filtering conditions: Text, Integer, Float, Date, Choice, Check Box, MultiChoice, Parent Folder, Created Date, Created By, Last Changed Date, Last Changed By, Owner, Link, Linklist, Incoming Link, Unique Id.

Parameter	Description
	<ul style="list-style-type: none">▪ For attributes like Choice and MultiChoice you can specify the name of the items as the filtering value. For Link, Linklist and Incoming Link you need to specify the id of the target element as the filtering condition. For Parent Folder, Owner, Created By and Last Modified by attributes you can either specify the name or id of the target element.▪ To filter based on more than one attribute value, provide the filtering condition by comma-separating the individual values.
	<p>Example:</p> <pre>fields=elementCollection/Element/attributes/ (Geography contains Asia,Europe)</pre> <p>This will filter the elements whose Geography contains both Asia and Europe (applies 'all' condition).</p>
	<p>For multivalued attributes like MultiChoice and Linklist you can prefix the filtering condition with <code>or</code>, to specify the 'any' condition while filtering.</p>
	<p>Example:</p> <pre>fields=elementCollection/Element/attributes/ (Geography contains or,Asia,Europe)</pre> <p>This will filter the elements whose Geography contains either Asia or Europe (applies 'any' condition).</p>
	<ul style="list-style-type: none">▪ For parent folder attribute prefix the filtering condition with <code>r</code>, to set recursive rule.
	<p>Example:</p> <pre>fields=elementCollection/Element/attributes/ (Parent Folder is r,System)</pre> <p>This will filter all elements whose parent folder is System or any of its subfolders.</p>
paging, pageSize, pageNo	Use these parameters to retrieve the collection of elements that are paginated. When pagination is enabled the XML document shows an additional link to the next page.
	<p>Types</p>
	<p>paging: Boolean</p>
	<p>pageSize: Integer</p>
	<p>Note: The user can also supply pagesize as a parameter.</p>

Parameter	Description
	<p>pageNo: Integer</p> <p>Note: The user can also supply pageno as a parameter.</p>
	<p>Examples</p> <pre><fp:link href="https://fpserver.com:9443/fp/resources/workspaces /2/modules/1/elements/?pageno=1&pageSize=2&paging=true& includeAttributes=true" rel="next" Page="0"/></pre> <hr/> <pre>paging=true&pageSize=2&pageno=1</pre>
includeHistoryOfAttr ibutes, start, end	<p>Set the parameter to “true”, and then specify the start and the end date to retrieve the history of the attributes.</p> <ul style="list-style-type: none">▪ yyyy-MM-dd'T'HH:mm:ss▪ yyyy-MM-dd'T'HH:mm▪ yyyy-MM-dd▪ yyyy-MM-dd HH:mm:ss▪ yyyy-MM-dd HH:mm
	<p>Types</p> <hr/> <p>includeHistoryOfAttributes: Boolean</p> <hr/> <p>start: Date or Date Time</p> <hr/> <p>end: Date or Date time</p> <hr/>
	<p>Examples</p> <pre>includeHistoryOfAttributes=true&start=2011-03- 22T12:00:00+01:00&end=2011-06-22T12:00:00+01:00</pre> <hr/> <pre>includeHistoryOfAttributes=true&start=2011-03- 22T12:00+GMT+01:00&end=2011-06-22T12:00+GMT+01:00</pre> <hr/>
genericTimeGrid	<p>Set the parameter to true for retrieving the time grid attribute sheets in a generic format. This can be used for reporting using Rational Insight.</p> <p>Note: The user can also supply generictimegrid as a parameter.</p> <hr/>
	<p>Type: Boolean</p> <hr/>
	<p>Example</p> <pre>genericTimeGrid=true</pre> <hr/>

Parameter	Description
optimize	Set the parameter to true to optimize the content. If this is set to true, the response will not include rich text and formula information of the attributes. Also alternate urls to the element will not be provided in the response.
	Type: Boolean
	Example
	optimize=true
includeLinkTable	Set the parameter to true to include attributes from the link targets in the response. The view should have a link table defined for the link/link list attributes. All visible attributes shown in the link table set up will be part of the link/linklist attribute response.
	Type: Boolean
	Example
	includeLinkTable=true
sortID	Use this parameter to sort the elements in the collection based on an attribute in the view. Provide the id of the attribute as the value for the parameter.
	Type: Integer
	Example
	sortID=100
descending	Use this parameter to sort the elements in the collection in descending order. If this parameter is not specified, sorting will be done in ascending order.
	Type: Boolean
	Example
	descending=true

For details and annotations of the XML format for the service document, see the XML Schema document. The URI for the schema is in the `schemaLocation` XML attribute of the service document.

POST method

Use this method to create new element to a module. Non-administrators can use view parameters to create. This example is on using the POST method to create new elements. The user must have administrator permission for creating elements in the module.

Example on using the POST method to create elements

URL

`https://fpserver.com:9443/fp/resources/workspaces/3/modules/1/elements/.xml`

Accept header

`application/xml`

Request body

```
<ns:newElement
  xmlns:ns="https://fpserver.com:9443/fp/namespace/workspaces/3/modules/1/elements" xmlns:fp="http://schema.ibm.com/focalpoint/resources" > <ns:Title>
<fp:textValue xmlns:fp="http://schema.ibm.com/focalpoint/resources">karthi
1</fp:textValue> </ns:Title> <ns:MealPreference
value="NonVeg"></ns:MealPreference> <ns:type_is_a_folder
value="true"></ns:type_is_a_folder> <ns:Comments> <ns:newTextListEntry>
<fp:textValue xmlns:fp="http://schema.ibm.com/focalpoint/resources">text
entry 1</fp:textValue> </ns:newTextListEntry> <ns:newTextListEntry>
<fp:textValue xmlns:fp="http://schema.ibm.com/focalpoint/resources">text
entry 2</fp:textValue> </ns:newTextListEntry> </ns:Comments>
<ns:RelatedReleases> <fp:linkChange
value="https://fpserver.com:9443/fp/resources/workspaces/3/modules/3/elemen
ts/40"></fp:linkChange> <fp:linkChange
value="https://fpserver.com:9443/fp/resources/workspaces/3/modules/3/elemen
ts/41"></fp:linkChange> </ns:RelatedReleases><ns:Parent_Folder
value="https://fpserver.com:9443/fp/resources/workspaces/3/modules/1/elemen
ts/61"></ns:Parent_Folder> </ns:newElement>
```

The root node `<ns:newElement>` is based on the module name. For example: if the module name is products, then the new element is product.

Supported parameters for the POST method

Parameter	Type
optimize	Set this parameter to true to optimize element creation.
Type: Boolean	

This example uses the POST method to create new elements using a view. The non-administrator can add elements to the module using the views.

Example on using the POST method to create elements using views1

URL <https://fpserver.com:9443/fp/resources/workspaces/3/modules/1/elements/.xml?view=200&optimize=true>

Accept header application/xml

Request body

```
<ns:newElement
  xmlns:ns="https://fpserver.com:9443/fp/namespace/workspaces/3/modules/1/views/200/elements"
  xmlns:fp="http://schema.ibm.com/focalpoint/resources" > ...
</ns:newElement>
```

The root node (<ns:newElement>) is based on the module name. For example: if the module name is products, then the new element is product.

Multipart POST: This example uses the POST method to update multiple attributes through one HTTP request. The content type for this request is multipart/related. You can only use the POST method only to add links, delete links of an element.

URL <https://fpserver.com:9443/fp/resources/workspaces/5/modules/1/elements/.xml>

Accept header application/xml

Content type multipart/related

Request body

```
<attributeChangeCollection
  xmlns:ns="https://schema.com/focalpoint/resources" >
  <linkListChange href="/14/attributes/224"> <ns:addLink
    value="https://fpserver.com:9443/fp/resources/workspaces/5/modules/3/elements/20"></ns:addLink> <ns:addLink
    value="https://fpserver.com:9443/fp/resources/workspaces/5/modules/3/elements/19"></ns:addLink> <ns:deleteLink
    value="https://fpserver.com:9443/fp/resources/workspaces/5/modules/3/elements/18"></ns:deleteLink> </linkListChange>
  <textListEntryChange href=".14/attributes/223/entries/" >
    <ns:textValue>one</ns:textValue> </textListEntryChange>
  </attributeChangeCollection >
```

PUT method

Multipart PUT: This example is on using the PUT method to update multiple attributes through one HTTP request. The content type for this request is multipart/related.

	URL	http://fpserver.com:9443/fp/resources/workspaces/5/modules/1/elements/.xml
	Accept header	application/xml
	Content type	multipart/related
Request body		<attributeChangeCollection xmlns:ns="http://schema.com/focalpoint/resources"> <textAttributeChange href=".14/attributes/2"> <ns:textValue>new text value</ns:textValue> </textAttributeChange> <textAttributeChange href=".15/attributes/2"> <ns:textValue>new text value</ns:textValue> </textAttributeChange> <textListEntryChange href=".14/attributes/223/entries/212309123" > <ns:textValue>replaced value</ns:textValue> </textListEntryChange> </attributeChangeCollection>

Elements

An element contains all the attribute values of the element.

GET method

Use this method to retrieve the element details. You can use the View parameter to filter the attributes.

	URL	https://fpserver.com:9443/fp/resources/workspaces/2/modules/1/elements/001.xml
	Accept header	application/xml

URL	https://fpserver.com:9443/fp/resources/workspaces/2/modules/1/elements/001.xml
Response body	<pre> -<ns:Element xsi:schemaLocation="https://fpserver.com:9443/fp/namespace/works paces/2/modules/1/module.xsd"> <ns:attributes> <ns:ID writable="false"> <ns:uniqueId value=""> <ns:alias>799af0ed-6316-4116-8749- ce2353e80ac5</ns:alias> </ns:ID> <ns:Title writable="true"> <ns:text></ns:text> <ns:alias>7d5c25cb-e2a2-4d94-8b03- 1cf603d2833b</ns:alias> <ns:editLink href="https://fpserver.com:9443/fp/resources/workspaces/2/module s/1/elements/1/attributes/2"/> </ns:Title> <ns:Description writable="true"></ns:Description> <ns:type_is_a_folder wr itable="true"></ns:type_is_a_folder> <ns:check_boxes_are_selected_in_the_chart writable="true"></ns:check_boxes_are_selected_in_the_chart> <ns:Element_Information writable="false"/> <ns:Owner writable="true"></ns:Owner> <ns:Creator writable="false"></ns:Creator> <ns:Created_Date writable="false"></ns:Created_Date> <ns>Last_Changed_By writable="false"></ns>Last_Changed_By> <ns>Last_Changed_Date writable="false"></ns>Last_Changed_Date> <ns:Parent_Folder writable="true"></ns:Parent_Folder> <ns:Text_List writable="true"></ns:Text_List> </ns:attributes><ns:selfLink href="https://fpserver.com:9443/fp/resources/workspaces/2/module s/1/elements/1"/> <ns:mspLink href="https://fpserver.com:9443/fp/resources/workspaces/2/module s/1/elements/1?format=mspxml"/> <ns:htmlLink href="https://fpserver.com:9443/fp/servlet/Login?go=2,1"/> <ns:alias>7602dc18-d64c-4360-8098-de0b0a385bf8</ns:alias> </ns:Element></pre>

Parameters	Type	Description	Example
view	Integer	Use this parameter to specify the view ID for retrieving the attributes that are in the view.	
filter	Integer	This must be used with the view parameter. Use this parameter to pass the filter ID for retrieving attributes based on the filter criteria.	view=14&filter=1
metadata	String	Set the parameter to schema to retrieve the schema of the element's XML document	metadata=schema

Parameters	Type	Description	Example
fields	XPath expression	Use this parameter to pass XPath expression to retrieve specific set of attributes.	fields=attributes/(ID Title Owner)
includeHistoryOfAttributes	Boolean	Set the parameter to true and specify the start and the end date to retrieve the history of the attributes.	includeHistoryOfAttributes=true&start=2011-03-22T12:00:00+01:00&end=2011-06-22T12:00:00+01:00
start	Date or Date Time		
end	Date or Date time	yyyy-MM-dd'T'HH:mm:ss yyyy-MM-dd yyyy-MM-dd HH:mm:ss yyyy-MM-dd HH:mm	includeHistoryOfAttributes=true&start=2011-03-22T12:00+GMT+01:00&end=2011-06-22T12:00+GMT+01:00
genericTimeGrid	Boolean	Set the parameter to true for retrieving the time grid attribute sheets in a generic format. This can be used for reporting using Rational Insight. Note: The user can also supply generictimegrid as a parameter.	genericTimeGrid=true
optimize	Boolean	Set the parameter to true to optimize the content. If this is set to true, the response will not include rich text and formula information of the attributes. Also alternate urls to the element will not be provided in the response.	optimize=true
includeLinkTable	Boolean	Set the parameter to true to include attributes from the link targets in the response. The view should have a link table defined for the link/link list attributes. All visible attributes shown in the link table set up will be part of the link/linklist attribute response.	includeLinkTable=true

For details and annotations of the XML format for the service document, see the XML Schema document. The URI for the schema is in the `schemaLocation` XML attribute of the service document.

Attributes

The representation of an attribute contains the value of the attribute. Certain attributes have multiple collection of values and each value has attribute URIs. For example: TextList and File. The representation of the single attribute value also includes the edit links for each text entry in the list. You can change an attribute value of an element by using PUT, POST, or DELETE:

Use PUT operation to update these attribute types: CheckBox, Choice, Date, Float, Integer, Link, LinkList, Matrix, Multichoice, Text, Time Grid, URL, and UniqueId.

For TextList, LinkList and File attributes, use POST operation to add a text entry, link entry or a file.

Use PUT operation to update a text entry, link entry or file, and use DELETE operation to remove a text entry or file.

For a Version attribute, use POST operation to increment to the next major version.

The XML format to update an attribute value is different from the XML representation of the value. For example, a Text attribute might have both a text value and an expression, but when the attribute is updated, it can be given either a new text value or an expression. When you update an attribute, use the XML that is described by the XML Schema document for the attribute.

GET method

Use this method to retrieve the attribute details.

URL `https://fpserver.com:9443/fp/resources/workspaces/2/modules/1/elements/15/attributes/220.xml`

Accept header application/xml

URL	https://fpserver.com:9443/fp/resources/workspaces/2/modules/1/elements/15/attributes/220.xml
Response body	<pre> <ns:Text_List writable="true" xsi:schemaLocation="https://fpserver.com:9443/fp/namespace/works paces/2/modules/1/attribute https://fpserver.com:9443/fp/resources/workspaces/2/modules/1/el ements/15/attributes/220/attribute.xsd"> <ns:textList> <fp:textListEntry createdDate="2013-05-02T13:50:09+05:30" lastChangedDate="2013-05-02T13:50:09+05:30"> <fp:author title="Admin"/><fp:lastChangedBy title="Admin"/> <fp:textValue>Sample Text 1</fp:textValue> <fp:formattedTextValue>Sample Text 1
</fp:formattedTextValue> <fp:xhtmlTextValue><div>Sample Text 1</div></fp:xhtmlTextValue> <fp:link href="https://fpserver.com:9443/fp/resources/workspaces/2/module s/1/elements/15/attributes/220/entries/1367482809131" rel="edit"/> </fp:textListEntry> <fp:textListEntry createdDate="2013-05-02T13:50:17+05:30" lastChangedDate="2013- 05-02T13:50:17+05:30"> <fp:author title="Admin"/><fp:lastChangedBy title="Admin"/> <fp:textValue>Sample Text 2</fp:textValue> <fp:formattedTextValue>Sample Text 2</fp:formattedTextValue> <fp:xhtmlTextValue><div>Sample Text 2</div></fp:xhtmlTextValue> <fp:link href="https://fpserver.com:9443/fp/resources/workspaces/2/module s/1/elements/15/attributes/220/entries/1367482817756" rel="edit"/> </fp:textListEntry> </ns:textList> <ns:alias>ed2ad85f-5b87-4704-b384-e041888439c0</ns:alias> <ns:editLink href="https://fpserver.com:9443/fp/resources/workspaces/2/module s/1/elements/15/attributes/220"/> </ns:Text_List></pre>

Parameters	Type	Description	Example
view	Integer	Use this parameter to specify the view ID for retrieving the attributes that are in the view.	
filter	Integer	This must be used with the view parameter. Use this parameter to pass the filter ID for retrieving elements and attributes based on the filter criteria.	view=14&filter=1
metadata	String	Set the parameter to schema to retrieve the schema of the attribute's XML document	metadata=schema

Parameters	Type	Description	Example
includeHistoryOfAttributes	Boolean	Set the parameter to true and specify the start and the end date to retrieve the history of the attributes.	includeHistoryOfAttributes=true&start=2011-03-22T12:00:00+01:00&end=2011-06-22T12:00:00+01:00
start	Date or Date Time	yyyy-MM-dd'T'HH:mm:ss	
end	Date or Date time	yyyy-MM-dd'T'HH:mm yyyy-MM-dd yyyy-MM-dd HH:mm:ss yyyy-MM-dd HH:mm	includeHistoryOfAttributes=true&start=2011-03-22T12:00+GMT+01:00&end=2011-06-22T12:00+GMT+01:00
genericTimegrid	Boolean	Set the parameter to true for retrieving the time grid attribute sheets in a generic format. This can be used for reporting using Rational Insight.	genericTimegrid=true

For details and annotations of the XML format for the service document, see the XML Schema document. The URI for the schema is in the `schemaLocation` XML attribute of the service document.

POST method

Use this method to create new entry to the attribute collection. This example is on using the POST method to add new values to an attribute TextList collection. The user must have administrator permission for adding values to the attribute collection.

URL	<code>http://fpserver.com:8091/fp/resources/workspaces/2/modules/1/elements/53/attributes/237.xml</code>
Accept header	application/xml
Request body	<textListEntryChange xmlns:ns="http://schema.ibm.com/focalpoint/resources"> <ns:textValue>one</ns:textValue> </textListEntryChange>

This example uses the POST method to add new values to a File attribute.

URL	<code>http://fpserver.com:8091/fp/resources/workspaces/2/modules/1/elements/53/attributes/228.xml</code>
Accept header	application/xml

URL **http://fpserver.com:8091/fp/resources/workspaces/2/modules/1/elements/53/attributes/228.xml**

Request body

```
<fileChange
  xmlns:ns="http://schema.ibm.com/focalpoint/resources">
  <ns:fileName>a.txt</ns:fileName>
  <ns:contentType>plain/text</ns:contentType>
  <ns:fileData>YWJj</ns:fileData> </fileChange>
```

This example uses the POST method to add new values to a LinkList attribute and deleting a link.

URL **http://fpserver.com:8091/fp/resources/workspaces/2/modules/1/elements/53/attributes/236.xml**

Accept header application/xml

Request body

```
<linkListChange
  xmlns:ns="http://schema.ibm.com/focalpoint/resources">
  <ns:addLink
    value="http://fpserver.com:8091/fp/resources/workspaces/2/modules/13/elements/30"> </ns:addLink> <ns:deleteLink
    value="http://fpserver.com:8091/fp/resources/workspaces/2/modules/13/elements/29"></ns:deleteLink> </linkListChange>
```

This example uses the POST method to update the value of the Version Attribute to the next major version.

URL **http://fpserver.com:8091/fp/resources/workspaces/2/modules/1/elements/53/attributes/245.xml**

Accept header application/xml

Request body

```
<VersionAttribute nextMajorVersion="true"></VersionAttribute>
```

PUT methods

This example uses the PUT method to update the attribute value.

Attribute type Request body

Check Box, Lock

```
<checkBoxChange value="false"> </checkBoxChange>
```

Choice

```
<choiceAttributeChange value="Closed">
</choiceAttributeChange>
```

Date

```
<dateChange
  xmlns:ns="http://schema.ibm.com/focalpoint/resources">
  <ns:value>2011-01-01T00:00:00+05:30</ns:value> </dateChange>
```

Attribute type Request body

Float	<pre><floatChange xmlns:ns="http://schema.ibm.com/focalpoint/resources"> <ns:value>201</ns:value> </floatChange></pre>
File	<p>URL example:</p> <pre>http://localhost:8080/fp/resources/workspaces/3/modules/13/elements/16/attributes/237/files/01.xml <fileChange xmlns:ns="http://schema.ibm.com/focalpoint/resources"> <ns:fileName>a.txt</ns:fileName> <ns:contentType>plain/text</ns:contentType> <ns:fileData>YWJj</ns:fileData> </fileChange></pre>
Link	<pre><linkValueChange value="http://fpserver.com:8091/fp/resources/workspaces/2/modules/1/elements/16"> </linkValueChange></pre>
Integer	<pre><integerChange xmlns:ns="http://schema.ibm.com/focalpoint/resources"> <ns:value>201</ns:value> </integerChange></pre>
List (Link)	<pre><linkChange xmlns:ns="http://schema.ibm.com/focalpoint/resources"> <ns:linkChange value="http://fpserver.com:8091/fp/resources/workspaces/2/modules/1/elements/72"> </ns:linkChange> <ns:linkChange value="http://fpserver.com:8091/fp/resources/workspaces/2/modules/1/elements/73"> </ns:linkChange> </linkChange></pre>
List (Text)	<p>URL example:</p> <pre>http://localhost:8080/fp/resources/workspaces/3/modules/13/elements/19/attributes/247/entries/1369815257240.xml <textListEntryChange xmlns:ns="http://schema.ibm.com/focalpoint/resources"> <ns:textValue>one</ns:textValue> </textListEntryChange></pre>
Matrix	<pre><matrixChange xmlns:ns="http://schema.ibm.com/focalpoint/resources"> <ns:row> <ns:cell> <ns:value>A</ns:value> </ns:cell> <ns:cell> <ns:value>B</ns:value> </ns:cell> </ns:row> <ns:row> <ns:cell> <ns:value>Row 1</ns:value> </ns:cell> <ns:cell> <ns:value>Simple text value</ns:value> </ns:cell> <ns:cell> <ns:expression>1 + 2</ns:expression> </ns:cell> </ns:row> </matrixChange></pre>
MultiChoice	<pre><multichoiceAttributeValues xmlns:ns="http://fpserver.com:8091/fp/namespace/workspaces/2/modules/1/attribute"> <ns:selected>Open</ns:selected> <ns:selected>One</ns:selected> </multichoiceAttributeValues></pre>

Attribute type Request body

Text	<textAttributeChange xmlns:ns="http://schema.ibm.com/focalpoint/resources"> <ns:textValue>new text value</ns:textValue> </textAttributeChange>
Timegrid (Header)	<timeGridChange xmlns:ns="http://fpserver.com:8091/fp/namespace/workspaces/2 /modules/1/attribute"> <ns:timeGridSetting sheetId="1" startDate="2011-12-31" endDate="2012-03-30"> </ns:timeGridSetting> </timeGridChange>
TimeGrid (Data)	<timeGridChange xmlns:ns="http://fpserver.com:8091/fp/namespace/workspaces/2 /modules/1/attribute"> <ns:cell sheetId="1" date="2011-12- 31" columnId="A" rowId="1"> <ns:value>23</ns:value> </ns:cell> <ns:cell sheetId="1" date="2011-12-31" columnId="A" rowId="2"> <ns:value>24</ns:value> </ns:cell> </timeGridChange>
UniqueID	<uniqueIdChange value="5671"> </uniqueIdChange>
URL	<urlChange value="www.ibm.com/developerworks"> </urlChange>

DELETE method

This example uses the DELETE method to delete the attribute value.

Attribute type Request body

File	URL example: <code>http://localhost:8080/fp/resources/workspaces/3/modules/13/e lements/16/attributes/237/files/01.xml</code>
List (Text)	To delete the 01 file, specify this URL and use the delete command. URL example: <code>http://localhost:8080/fp/resources/workspaces/3/modules/13/e lements/19/attributes/247/entries/1369815257240.xml</code>

To delete the entry from the list text attribute.



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