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This document is valid for SM9.32 and later versions, which include RESTful API. Previous versions only provide BDM RESTful, for integrations with OMi.

## Introducción

REST is intended to be a more simple tool than SOAP or WSDL but providing the same capabilities.

The actions it allows are:

POST - create a record

GET - retrieve a record

PUT - change/update a record

DELETE - remove a record

It's stateless: Opens connection, sends request and closes connection.

## Use it with any web browser

To retrieve records (ie. Action GET) any browser works. For PUT/POST actions, it's necessary a third party tool (plugin in the browser, SoapUI, etc.)

Provide the operator (eg falcon) permission for RESTful API: in the operator record, tab Startup, add RESTful API to the list Execute Capabilities.

In the extaccess services (eg ChangeManagement) there's a tab to enable REST with a checkbox (another checkbox enables attachments)

A list of all the modules and actions available can be seen by entering the following URL:  
[http://SMhostname:SM\\_port/SM/9/rest](http://SMhostname:SM_port/SM/9/rest)

To retrieve un single record:

[http://SMhostname:SM\\_port/SM/9/rest/incidents?number=IM10004](http://SMhostname:SM_port/SM/9/rest/incidents?number=IM10004)

or

También vale [http://SMhostname:SM\\_port/SM/9/rest/incidents/IM10004](http://SMhostname:SM_port/SM/9/rest/incidents/IM10004)

This is a summary, to see all fields

[http://SMhostname:SM\\_port/SM/9/rest/incidents?number=IM10004&view=expand](http://SMhostname:SM_port/SM/9/rest/incidents?number=IM10004&view=expand)

You can get all the records depending on the values of several fields adding them to the URL (severity=3, category=Hardware...)

## Create modify records - Using a Firefox plugin

In my case I used Poster plugin for Firefox, but there are many others

(<http://stackoverflow.com/questions/2990878/how-to-do-rest-calls-from-google-chrome>),

for example POSTMAN or RESTclient and not only for Firefox.

### Steps to install Poster:

- a. Install Mozilla Firefox on some client that can reach the SM server.
- b. Install the Poster plugin to Mozilla Firefox
  - i. Tools->Add Ons
  - ii. Type "Poster" into the search box.
  - iii. If "Poster" appears select the "Install" button, if not click the link at the bottom "See all xx results" and then select "Poster".
  - iv. Restart Firefox.
- c. Start the plugin: Select Tools->Poster

## POST an incident to SM

Start the plugin Firefox Poster (Ctrl+Alt+P)

Enter URL: [http://<SM\\_server\\_IP>:13080/SM/9/rest/incidents](http://<SM_server_IP>:13080/SM/9/rest/incidents) (replace hostname, port, protocol as required) and fill in the necessary information

1. User Auth: as required
2. Timeout: 60 (or whatever you wish)
3. Content Type: application/xml
4. Content: Paste the XML request. For example:

```
<incident relationships_included='false' type='urn:x-  
hp:2009:software:data_model:type:incident' version='1.1'  
xmlns='http://www.hp.com/2009/software/data_model' >  
  <active_process>true</active_process>  
  <it_process_category>incident</it_process_category>  
  <incident_type>incident</incident_type>  
  <impact_scope label='Enterprise'>site-dept</impact_scope>  
  <external_process_reference>urn:x-hp:2009:opr:b88adab4-572b-4f47-bfab-  
2e0e2bef5298:incident|escalated|provider:ce5dd491-0931-4508-bd69-  
366ed9562b87</external_process_reference>  
  <name>Test Incident from OMi</name>  
  <description>some description</description>  
  <incident_status>open</incident_status>  
  <urgency>4</urgency>  
  <priority>3</priority>  
</incident>
```

5. Press the "POST" button. This will post the request to SM. Wait for the response. NOTE: If poster times out waiting for the result it will notify you of the timeout, but will later popup the response when it finally arrives.
6. Check the XML returned. Should be 200 OK and the XML will contain the incident number, IMxxxxx. Please make note of the number.
7. Press "POST" again. SM will return a new incident. It SHOULD return the same incident as the first request.

## Retrieve an Incident

This was already explained in the section "Use it with any web browser", but Poster also allows to do it.

This can be done directly in any web browser.

In the browser, enter URL:

[http://<SM\\_server\\_IP>:13080/SM/9/rest/incidents/IM10142](http://<SM_server_IP>:13080/SM/9/rest/incidents/IM10142)

Change the hostname and IM number depending on the Incident you want to retrieve and you'll get the response with the info for that Incident.

Using the plugin Firefox Poster, enter that same URL and click button "GET" to retrieve the list of Incidents. But visually is far less appealing.

## Retrieve a list of Incidents

This can be done directly in any web browser.

In the web browser, enter URL:

[http://<SM\\_server\\_IP>:13080/SM/9/rest/incidents](http://<SM_server_IP>:13080/SM/9/rest/incidents)

Change the hostname to the one where you're running the tests.

This simply returns a list with the Incident ID, open time and brief description, but it's really useful when finding out if the connection to SM is working

Using the plugin Firefox Poster, enter that same URL and click button "GET" to retrieve the list of Incidents. But visually is far less appealing.

## Update an Incident

Start the plugin Firefox Poster (Ctrl+Alt+P)

Enter URL: [http://<SM\\_server\\_IP>:13080/SM/9/rest/incidents/IM10143](http://<SM_server_IP>:13080/SM/9/rest/incidents/IM10143) (replace hostname, port, protocol as required) and enter the Incident ID you want to change. Fill in the necessary information

1. User Auth: as required
2. Timeout: 60 (or whatever you wish)
3. Content Type: application/xml
4. Content: Paste the XML request. For example:

```
<incident relationships_included='false' type='urn:x-  
hp:2009:software:data_model:type:incident' version='1.1'  
xmlns='http://www.hp.com/2009/software/data_model'>  
  <priority>1</priority>  
  <it_process_category>incident</it_process_category>  
  <incident_type>incident</incident_type>  
  <impact_scope label='Enterprise'>site-dept</impact_scope>  
  <incident_status>closed</incident_status>  
</incident>
```

5. Press the "PUT" button. This will post the request to SM. Wait for the response
6. Check the XML returned. Should be 200 OK

## Retrieve list of attachments

This can be done directly in any web browser.

In the browser, enter URL

[http://<SM\\_server\\_IP>:13080/SM/9/rest/incidents/IM10143/attachments](http://<SM_server_IP>:13080/SM/9/rest/incidents/IM10143/attachments)

Change the hostname to the one where you're running the tests.

This returns no incident data, the response just contains the list of all attachments (size, attachment id, number of total attachments).

## Download one attachment

This can be done directly in any web browser.

Once we have the attachment id (which was retrieved in the previous section), enter URL:

[http://<SM\\_server\\_IP>:13080/SM/9/rest/incidents/IM10143/attachments/cid:528f563d00255014807f7160](http://<SM_server_IP>:13080/SM/9/rest/incidents/IM10143/attachments/cid:528f563d00255014807f7160)

Change the hostname to the one where you're running the tests. And the cid for the one corresponding to the attachment we want to download.

A pop-up will show up to save the attachment in the local computer

## Upload an attachment to an incident

It's not possible to update fields in a record in the same request the attachment is sent. The request only allows to append the attachment.

For this it's necessary a tool like Poster (or Postman). SoapUI seems to have an issue when sending files over the network.

In Poster, enter the URL

[http://<SM\\_server\\_IP>:13080/SM/9/rest/incidents/IM10143/attachments](http://<SM_server_IP>:13080/SM/9/rest/incidents/IM10143/attachments)

**IMPORTANT NOTE:** In the headers section, enter the following header:

Name: content-disposition

Value: attachment;filename=file\_attach.bin

This is mandatory to make it work. The worst part is that the response is an error not descriptive at all:

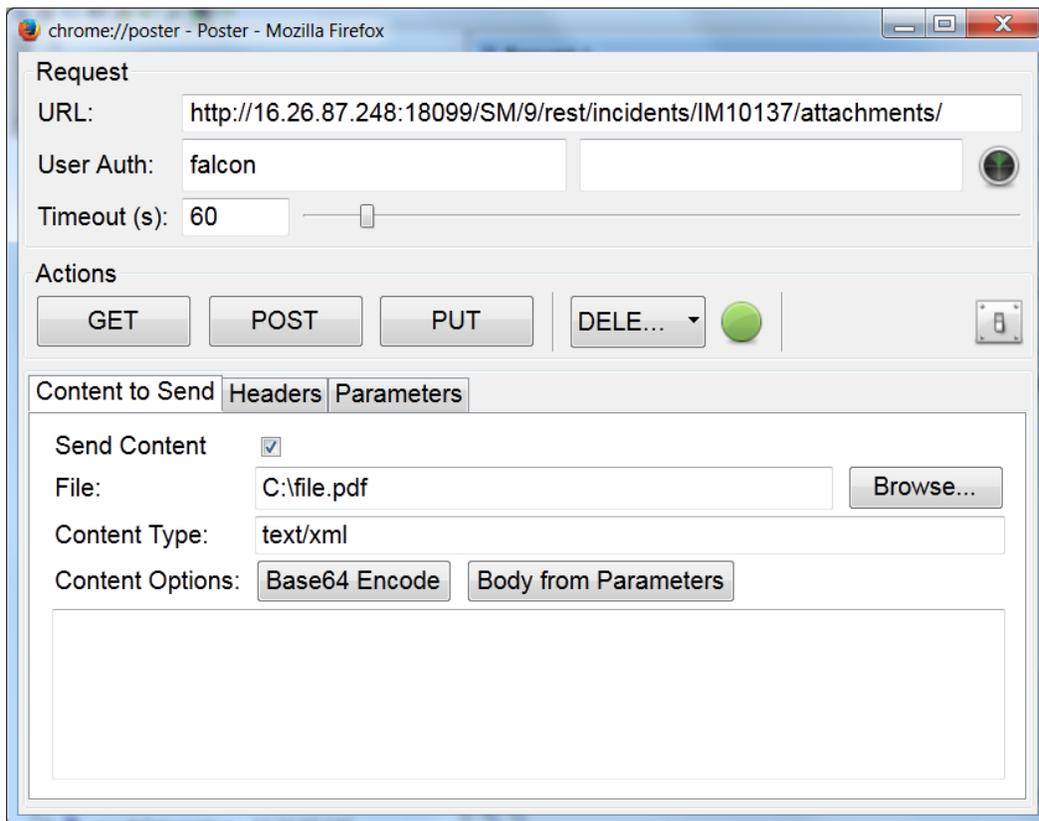
```
"Messages": ["Attachment name is required."],  
"ReturnCode": 71
```

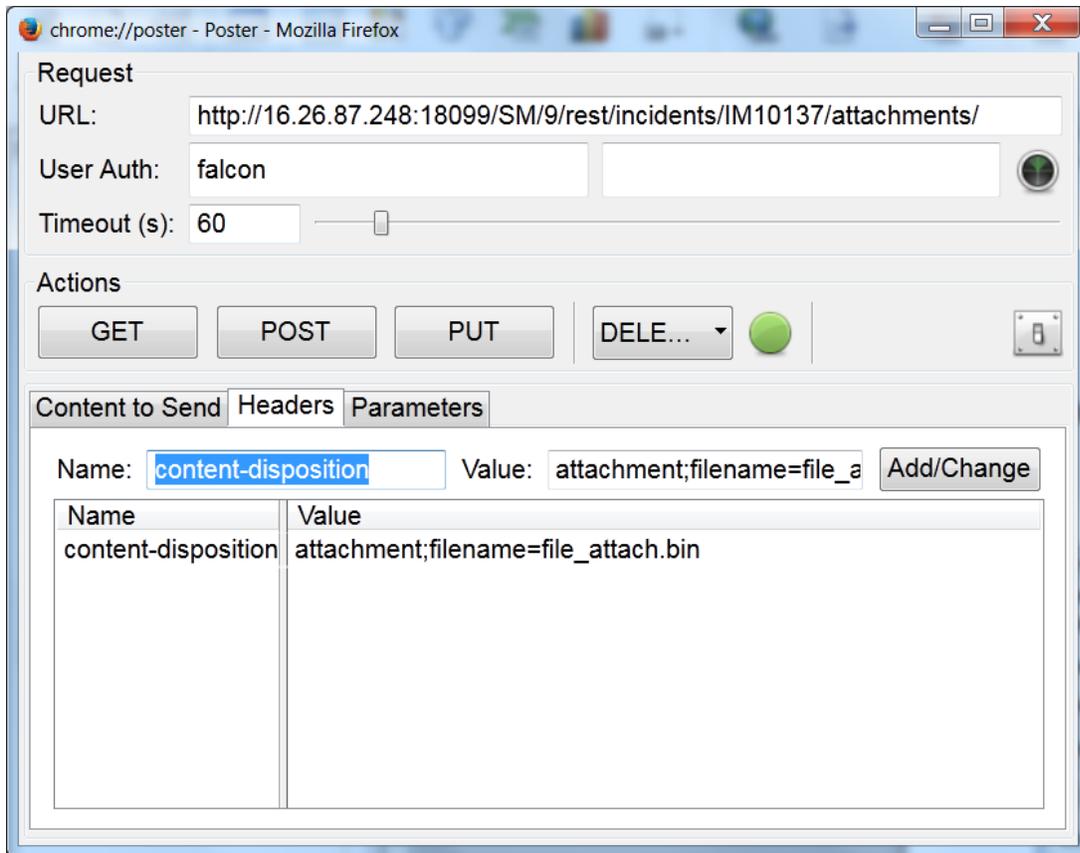
In the tab "Content to Send", browser to select the file to upload. (the filename doesn't matter, in the SM record the name will be "file\_attach.bin", independently of the original file name).

Content-Type can be binary, text... but I think this is automatic, no need to select any.

Click POST. In my tests, PUT doesn't work to send attachments

It will look like this





## Upload an attachment to an incident using SoapUI

In SoapUI, all I could do is send plain text to be included as attachment. It's only needed to add the header content-disposition as we did earlier and include the text as shown in this screenshot:

The screenshot displays a REST client interface for a request. The top bar shows the request details: Method (POST), Endpoint (http://16.26.87.248:18080), Resource (/SM/9/rest/incidents/IM10139/attachments/), and Parameters.

The request body is shown in a text area with the text: "text that will be added as attachment". The media type is set to "text/xml".

The response is shown in an XML view. The XML structure is as follows:

```
<Response xmlns="http://16.26.87.248/SM/9/rest/incidents/IM10139/attachments/">
  <Messages/>
  <ReturnCode>0</ReturnCode>
  <Attachment>
    <href>cid:528f6e4c00285004802f2a60</href>
    <len>37</len>
    <name>file2.txt</name>
    <type>text/xml</type>
    <xmimeContentType>text/xml</xmimeContentType>
  </Attachment>
</Response>
```

The response headers are shown in a table below:

Header	Value
content-disposition	attachment;filename=file2.txt

The bottom status bar shows the response time: 1661ms (206 bytes).

In this screenshot there's nothing in the attachments section, but even when it's included, the plain text is also sent as part of the attachment.