

Salesforce Rest API Issue

Metadata/DeployRequest

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I am facing issue when deploying trigger with salesforce rest api

<https://host/services/data/vXX.0/metadata/deployRequest>

I am calling the rest api from Apex class. We are creating triggers dynamically and want to deploy it to org with test class. For that we created a folder and kept “classes” and “triggers” folder under that. Then kept package.xml in it. Now creating zip files using Zippex.

Now calling the rest api to deploy trigger. My methods are as below:-

This method is getting code for trigger, test class, package.xml and then zipping it.

```
public static String triggerDeployment(String triggerName, String
apexTriggerCode, String testClassName, String testClassCode){

    String triggerMetadata = getTriggerCodeMetadata();

    String triggercode = apexTriggerCode;//getTriggerCode();

    String triggerTestClassMetadata = getTriggerTestCodeMetadata();

    String triggerTestClassCode = testClassCode;//getTriggerTestCode()

    String packageString = getPackageXML(triggerName,testClassName);
```

```
Zippex sampleZip = new Zippex();

Blob triggerMetadataBlob = Blob.valueOf(triggerMetadata);

sampleZip.addFile('triggers/' + triggerName+'.trigger-meta.xml',
triggerMetadataBlob, null);

Blob triggercodeBlob = Blob.valueOf(triggercode);

sampleZip.addFile('triggers/' + triggerName+'.trigger', triggercodeBlob,
null);

Blob triggerTestClassMetadataBlob =
Blob.valueOf(triggerTestClassMetadata);

sampleZip.addFile('classes/' + testClassName+'.cls-meta.xml',
triggerTestClassMetadataBlob, null);

Blob triggerTestClassCodeBlob = Blob.valueOf(triggerTestClassCode);

sampleZip.addFile('classes/' +testClassName+'.cls',
triggerTestClassCodeBlob, null);

Blob packageStringBlob = Blob.valueOf(packageString);

sampleZip.addFile('package.xml', packageStringBlob, null);

System.debug('sampleZip --->>>' + sampleZip);
```

```
Blob zipData = sampleZip.getZipArchive();

String zipEncoded = EncodingUtil.base64Encode(zipData);

String res = deployZipByRest(zipEncoded, testClassName);

return res;

}
```

The method named “deployZipByRest” is called from this method.

In this method I have written code to deploy a class using rest api.

```
public static String deployZipByRest(String bodyEncoded, String testClassName){
    String crlf = '\n';

    String boundary = '-----BOUNDARY';
    String endPoint = System.URL.getOrgDomainUrl().toExternalForm() +
'/services/data/v48.0/metadata/deployRequest';
    System.debug('endPoint ==>:' + endPoint);

    Map<String, Boolean> deployOptions = new Map<String, Boolean>();
    deployOptions.put('rollbackOnError', false);
    deployOptions.put('singlePackage', true);

    String deploymentOptions = '{"deployOptions" : {"allowMissingFiles" :
false,"autoUpdatePackage" : false,"checkOnly" : false,"ignoreWarnings" : false,
"performRetrieve" : false,"purgeOnDelete" : false,"rollbackOnError" :
false,"runTests" : ["'+ testClassName +'"], "singlePackage" : false,"testLevel" :
"RunSpecifiedTests"}}';

    Blob bodyPayLoad = getBinaryPostBody(crlf, boundary, deploymentOptions,
bodyEncoded);
```

```
if(bodyPayload.size()>3000000){
    return '';
}

HttpRequest req = new HttpRequest();
req.setEndpoint(endpoint);
req.setHeader('Authorization','Bearer ' + UserInfo.getSessionID());
req.setMethod('POST');
req.setHeader('Content-Type', 'multipart/form-data; boundary='+boundary);
req.setBodyAsBlob(bodyPayload);
req.setTimeout(120000);
System.debug('body blob size ==>:'+ req.getBodyAsBlob().size());
req.setHeader('Content-Length',
String.valueOf(req.getBodyAsBlob().size()));

Http http = new Http();
HttpResponse res = http.send(req);
System.debug('status code ==>:'+ res.getStatusCode());
System.debug('response body ==>:'+ res.getBody());

String response = res.getBody();
return response;
}

public static Blob getBinaryPostBody(String crlf, String boundary, String
deploymentOptions, String bodyEncoded) {
    String header = '--' + boundary + crlf
        + 'Content-Disposition: form-data; name="json"' + crlf
        + 'Content-Type: application/json;' + crlf + crlf
        + deploymentOptions + crlf
        + '--' + boundary + crlf
        + 'Content-Disposition: form-data;
name="file";filename="deploy.zip"' + crlf
        + 'Content-Type: application/zip;' + crlf + crlf;
```

```
String footer = + crlf + '--' + boundary + '--';

String headerEncoded = EncodingUtil.base64Encode(Blob.valueOf(header));
while(headerEncoded.endsWith('=')){
    header += ' ';
    headerEncoded = EncodingUtil.base64Encode(Blob.valueOf(header));
}

System.debug('bodyEncoded==>' + bodyEncoded);
String footerEncoded = EncodingUtil.base64Encode(Blob.valueOf(footer));

Blob bodyBlob = null;
//last encoded body bytes
String last4Bytes = bodyEncoded.substring(bodyEncoded.length() - 4,
bodyEncoded.length());
//if the last 4 bytes encoded base64 ends with the padding character (=
or ==) then re-encode those bytes with the footer
//to ensure the padding is added only at the end of the body
if(last4Bytes.endsWith('=')){
    System.debug('last4Bytes==>' + last4Bytes);
    Blob decoded4Bytes = EncodingUtil.base64Decode(last4Bytes);
    HttpRequest tmp = new HttpRequest();
    tmp.setBodyAsBlob(decoded4Bytes);
    String last4BytesFooter = tmp.getBody() + footer;
    bodyBlob = EncodingUtil.base64Decode(headerEncoded +
bodyEncoded.substring(0, bodyEncoded.length() - 4) +
EncodingUtil.base64Encode(Blob.valueOf(last4BytesFooter)));
}
else{
    bodyBlob = EncodingUtil.base64Decode(headerEncoded + bodyEncoded +
footerEncoded);
}
```

```
return bodyBlob;  
}
```

What is happening here is.. Our deployment status in org is showing successful. But no element is deployed. Means class is not deployed.

I have followed the following links to work on it.

Deploy sfdc doc

https://developer.salesforce.com/docs/atlas.en-us.api_meta.meta/api_meta/meta_rest_deploy.htm

Nerd@work article

<https://blog.enree.co/2013/01/salesforce-apex-post-mutipartform-data.html>

NOTE: Deploying zip file is working with MetadataService.MetaPort.

I tried it also from the Postman. Normally **Postman** is uploading files with multipart. But for this API still its saying undefined for files.

Communities posted on

https://trailhead.salesforce.com/trailblazer-community/feed?tab=my_activity&sort=LAST_MODIFIED_DATE_DESC

<https://salesforce.stackexchange.com/users/114433/abhi-sisodia>

