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### **Overview**

This document gives the overview of integration with Oracle via FBDI using Dell Boomi as Integration tool.

1. **File Based Data Import (FBDI):🡪**

* Oracle FBDI process is used for bulk data import.
* This process is used to integrate ERP system and load the data into it via oracle's API of Bulk import.
* For all the entities (for e.g. Product, Sales Order, Customer etc.) we have FBDI templates which we can get from Oracle Enterprise Repository.
* Once the template is filled, generate the csv files by clicking the ‘Generate CSV’ option provided in the Introduction tab of the template. This will create a zip file which contains all the csv files.
* FBDI process can be performed manually from the ERP cloud environment using ‘Scheduled Processes’ using which processes can be scheduled and submitted to achieve a desired result that impacts a select set of records, for example to create, update, or delete records.
* This is a two-step process:
  1. Loading files in the interface tables:
     + This step is responsible for loading the data into interface tables.
     + Job Name: Load Interface File for Import
  2. Importing the data:
     + In this step, the data is imported in the system by loading it from the interface tables to the base tables.
     + Job Name: Import job name is different for entity. For e.g. for sales order import we use “,ItemImportJobDef”.
* While loading the FBDI from Boomi to Oracle we use SOAP based service please find below details for the same.
* WSDL URL for the import:

https://{Hostname}/fscmService/ErpIntegrationService?wsdl

* Required parameters to pass for the request:
* Content🡪 The zipped data you need to load
* Zipped file name needs to be picked up for that run
* Content type🡪zip
* Jobname🡪Name of the job to be triggered in SaaS along with path ex. for Item Import it is **/oracle/apps/ess/scm/productModel/items,ItemImportJobDef**
* Parameter List 🡪 This is a optional filed if the job you are calling needs parameter to be passed you need to pass the values in comma separated format.

**Sample Request:**

soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/" xmlns:typ="http://xmlns.oracle.com/apps/financials/commonModules/shared/model/erpIntegrationService/types/" xmlns:erp="http://xmlns.oracle.com/apps/financials/commonModules/shared/model/erpIntegrationService/">

<soapenv:Header/>

<soapenv:Body>

<typ:importBulkData>

<!--Optional:-->

<typ:document> <erp:Content>UEsDBBQAAAAIAGaDA0s1V+b0WgAAAJoAAAASAAAASHpJbXBBY2NvdW50c1QuY3N2MzIyMrQ0NwMCCwsLIzMdFz8nHUMLA3NdQ11HZ+cQXQMDA3OwoItjiKMuVCZA1xxTUaiOjo5jcnJ+aV6JQklqcYmRAljYyMDQQN/QEIh0CAAjAyOYSlc/Fy4AUEsBAhQAFAAAAAgAZoMDSzVX5vRaAAAAmgAAABIAAAAAAAAAAQAgAAAAAAAAAEh6SW1wQWNjb3VudHNULmNzdlBLBQYAAAAAAQABAEAAAACKAAAAAAA=</erp:Content>

<erp:FileName>222197666688826.zip</erp:FileName>

<erp:ContentType>zip</erp:ContentType>

</typ:document>

<!--Zero or more repetitions:-->

<typ:jobDetails>

<!--Optional:-->

<erp:JobName>/oracle/apps/ess/cdm/foundation/bulkImport,BulkImportJob</erp:JobName>

<!--Optional:-->

<erp:ParameterList>222197666688826,222197666688826,CUSTOMER,CSV</erp:ParameterList>

<!--Optional:-->

</typ:jobDetails>

<!--Optional:-->

<typ:notificationCode>40</typ:notificationCode>

<!--Optional:-->

<typ:callbackURL>http://129.157.161.139:80/soa-infra/services/default/CallBackService/SOAPService</typ:callbackURL>

<!--Optional:-->

</typ:importBulkData>

</soapenv:Body>

</soapenv:Envelope>

**Sample Response:**

<env:Envelope xmlns:env="http://schemas.xmlsoap.org/soap/envelope/" xmlns:wsa="http://www.w3.org/2005/08/addressing">

<env:Header>

<wsa:Action>http://xmlns.oracle.com/apps/financials/commonModules/shared/model/erpIntegrationService//ErpIntegrationService/importBulkDataResponse</wsa:Action>

<wsa:MessageID>urn:uuid:21e755c9-f278-4106-b983-bc8701a48ec6</wsa:MessageID>

</env:Header>

<env:Body>

<ns0:importBulkDataResponse xmlns:ns0="http://xmlns.oracle.com/apps/financials/commonModules/shared/model/erpIntegrationService/types/">

<result xmlns="http://xmlns.oracle.com/apps/financials/commonModules/shared/model/erpIntegrationService/types/">346389</result>

</ns0:importBulkDataResponse>

</env:Body>

</env:Envelope

1. **Process Overview**

The process is to build a dynamic and reusable component to upload bulk data into Oracle SaaS with input request parameters and to get back the status of the submitted ESS job.

In general, From Dell boomi we upload the bulk data as encoded zip file to oracle UCM server and then need to capture the response which is a unique job id to track the status of the submitted job at oracle SaaS. Different set of status received from oracle SaaS to Dell Boomi like Wait, ToHold, Paused, Running, Error, Warning, Completed, succeeded etc., The getESSjobStatus operation must be repeated till job gets fail/complete.

All these steps have been arranged in this process such a way we can reuse this process in any project and any number of times to upload bulk data into Oracle and track the status of ESS job.

In below sections will illustrate in detail how to use and setup the process along with example snapshots.

## **Configuration**

To establish the connection from Dell Boomi to Oracle SaaS we required WSDL url, endpoint, username and password, these can be configured from atom level by extending these connection parameters at process level.

Below are the example connection details configured as per sample requirement, were we have used internal Infosys oracle SaaS instance to connect from Internal Infosys Boomi Instance.

|  |  |
| --- | --- |
| Extend the required properties and connections in caller process. |  |
| Set the oracle connection parameters according to your connection in extensions and execute the caller process |  |

## **Process Usage**

The importBulkData operation needs the below inputs

* Job name
* Parameter list (Comma separated values) based on the Job type pass all the parameter lists to be added
* Notification code
* Callback URL
* Name of the zip file to be uploaded

Also, to track back the submitted ESS job status we must check the status till completion/errored and for that we need to keep the wait time. Which is an interval to check the status of the job continually till get loop exit.

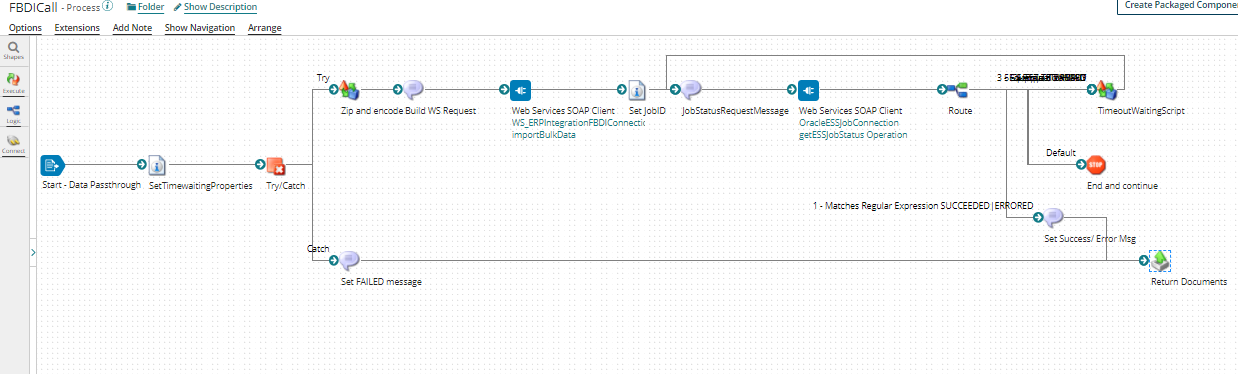
Set below properties in Caller process.

|  |  |  |  |
| --- | --- | --- | --- |
| Name of the Input property | Description | Mandatory/Optional | Property example |
| DPP\_JobName | This property is to set the name of the job package that must be submitted in Oracle | Yes |  |
| DPP\_ParameterList | The list of parameters used to run the job. The list determines the order of the parameters. The corresponding entry in the list must be blank when a given parameter is not passed. | No |  |
| DPP\_NotificationCode | A two-digit number that determines how and when a notification is passed for the status of the import job. | Yes | 00 |
| DPP\_CallBackURL | The callback URL of the web service you implemented to receive the ESS job status upon job completion. | No |  |
| DPP\_FileName | Name of the file on the UCM server | Yes |  |

## **Process**

The Process has the message shape which has the input request message to call the importBulkData Operation. The parameters are set at set properties shape based on the input request messages. Call the ‘importBulkData’ Request to get the Job ID as a response. Once we receive the Job ID as response from oracle SaaS then will pass the Job ID in request to getESSJobStatus Operation and get the status as a response from Oracle SaaS to Dell Boomi.

Screenshot of the processes,



## **1.4 Testing**

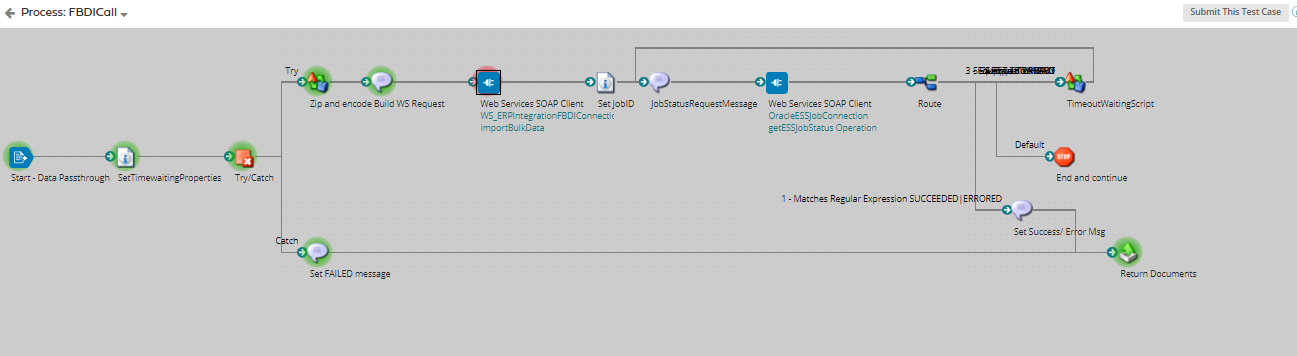
In Testing, we have considered positive and negative scenarios. Here we demonstrated positive scenario test cases with a sample importBulkData operation and the negative test scenarios with a connection issue with Oracle.

### **Testcases without Parameters: (Positive scenario)**

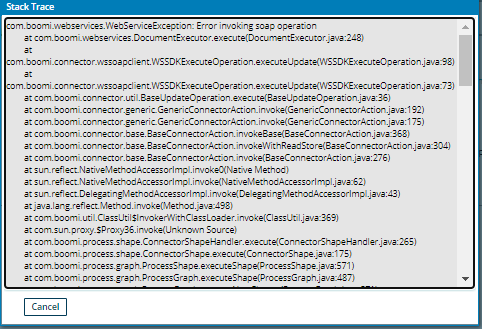
Below is the process flow that successfully uploads the content in UCM using importBulkData operation and using the Job id received from the importBulkData operation keeps checking the job status using getESSJobStatus operation till the status is completed or Error.

### **ESS Job-With Parameters List-Exceptional Handling: (Negative scenario)**

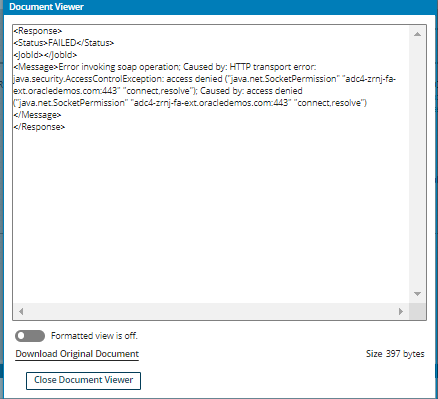
Below is the process flow where there is a connection issue in the Web service SOAP client connection, Hence the Webservice operation should fail and the flow has to be directed to the catch path.



The process is failed due to the connection Error



Below is the screenshot of catch response.



## **Sample Request and Response**

### **Profile Name: ImportBulkDataRequest**

**Description:** This is to upload the bulk data to oracle

**Sample Request:**

<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/" xmlns:typ="http://xmlns.oracle.com/apps/financials/commonModules/shared/model/erpIntegrationService/types/" xmlns:erp="http://xmlns.oracle.com/apps/financials/commonModules/shared/model/erpIntegrationService/">

<soapenv:Header/>

<soapenv:Body>

<typ:importBulkData>

<!--Optional:-->

<typ:document> <erp:Content>UEsDBBQACAgIAIgoTFEAAAAAAAAAAAAAAAAWAAAAMjg0MDYyMTczMzY1NDUwMTQ0LmRhdG3Quw6B

QRAF4N5jbC2bue3urM79ngj+iBqFAiEU3t6vsERm6i8nZ467Pi73w+5xux3Ou6druXbVc013Ou5d

C70AUFJgxGbD/cvuaPCR4DNxyvT2hlxvSiapz0lRIQoFg45nqw9lLwwEgAksOV1uSlGM6ilLEKEY

1cCr4c9XHBWCRs7WV5PFtkgIPqFAnRrYqtCvlt8FNEhWShLYkMPO4itTfXVPu+l8WzLFY4iUoMbW

qKNOWQp9FAXiLIovUEsHCBYhoAa8AAAA0gEAAFBLAQIUABQACAgIAIgoTFEWIaAGvAAAANIBAAAW

AAAAAAAAAAAAAAAAAAAAAAAyODQwNjIxNzMzNjU0NTAxNDQuZGF0UEsFBgAAAAABAAEARAAAAAAB

AAAAAA==</erp:Content>

<erp:FileName>>Daily\_Rates.zip</erp:FileName>

<erp:ContentType>zip</erp:ContentType>

</typ:document>

<!--Zero or more repetitions:-->

<typ:jobDetails>

<!--Optional:-->

<erp:JobName>/oracle/apps/ess/financials/generalLedger/programs/common,DailyRatesImport</erp:JobName>

<!--Optional:-->

<erp:ParameterList></erp:ParameterList>

<!--Optional:-->

</typ:jobDetails>

<!--Optional:-->

<typ:notificationCode>30</typ:notificationCode>

<!--Optional:-->

<typ:callbackURL>http://host:port/mycallbackservice</typ:callbackURL>

<!--Optional:-->

</typ:importBulkData>

</soapenv:Body>

</soapenv:Envelope>

### **1.5.2 Profile Name: importBulkDataResponse**

**Description:**  This is the response which we are getting from oracle for the importBulkData operation

**Sample Response:**

<?xml version="1.0" encoding="UTF-8" standalone="no"?><env:Envelope xmlns:env="http://schemas.xmlsoap.org/soap/envelope/" xmlns:wsa="http://www.w3.org/2005/08/addressing"><env:Header><wsa:Action>http://xmlns.oracle.com/apps/financials/commonModules/shared/model/erpIntegrationService//ErpIntegrationService/importBulkDataResponse</wsa:Action><wsa:MessageID>urn:uuid:d927d26a-3cba-45d0-8f36-4a333dde5465</wsa:MessageID></env:Header><env:Body><ns0:importBulkDataResponse xmlns:ns0="http://xmlns.oracle.com/apps/financials/commonModules/shared/model/erpIntegrationService/types/"><result xmlns="http://xmlns.oracle.com/apps/financials/commonModules/shared/model/erpIntegrationService/types/">2113733</result></ns0:importBulkDataResponse></env:Body></env:Envelope>

### **Profile Name: getESSJobStatusRequest**

**Description:** This is to get the job status request based on the job ID from submit ESS job response.

**Sample request:**

<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/" xmlns:typ="http://xmlns.oracle.com/apps/financials/commonModules/shared/model/erpIntegrationService/types/">

<soapenv:Header/>

<soapenv:Body>

<typ:getESSJobStatus>

<typ:requestId>2089069</typ:requestId>

</typ:getESSJobStatus>

</soapenv:Body>

</soapenv:Envelope>

### **Profile Name: getESSJobStatusResponse**

**Description:** This is to get the status of the ESS job. The status will be Ready, Wait, Error, Running, Completed, Succeeded.

**Sample Response:**

<?xml version="1.0" encoding="UTF-8" standalone="no"?><ns0:getESSJobStatusResponse xmlns:ns0="http://xmlns.oracle.com/apps/financials/commonModules/shared/model/erpIntegrationService/types/"><result xmlns="http://xmlns.oracle.com/apps/financials/commonModules/shared/model/erpIntegrationService/types/">ERROR</result></ns0:getESSJobStatusResponse>