

Handling of External data

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Here are a few ways: it depends of what you have at hand and what you want to do.

- [If you have a direct access to an external database, the easiest method is to connect to it through the OFBiz Entity Engine.](#)
- [Use of ETL tool to extract data from the lagacy database and import it using XML-RPC or OFBiz WebServices](#)
- [If the data is not in an external database but you have data in files that can be loaded](#)

Use the Entity xml data resource

Prepare xml file



Action tags are available only with OFBiz 13.07 or higher, before `<create-update>` was the default.

With the entity engine, you can load your data from an xml file. If you don't specify any action the `<create-update>` will be used, it's still the default.

Entity Xml Data Template

```
<entity-engine-xml>
  <action>
    <EntityName field1="value" field2="value" .../>
    <EntityName field1="value" ...>
      <field2> <![CDATA[Big text]]></field2>
    </EntityName>
  </action>
</entity-engine-xml>
```

The available actions are :

1. **<create>** : The entity loading mechanism checks all entity elements present under this action and if a research by the primary returns empty, creates it.
Otherwise nothing is done.
2. **<create-update>** : The entity loading mechanism checks all entity elements present under this action and if a research by primary key return empty, creates it.
Otherwise it updates the existing element with the given field value.
3. **<create-replace>** : The entity loading mechanism checks all entity elements present under this action and if a research by primary key return empty, creates it.
Otherwise it replaces the existing element with the given field value. If a field is present in the database but not on xml definition, it will be set to empty.
4. **<delete>** : The entity loading mechanism checks all entity elements present under this action and if a research by primary key return empty, tries to delete it.
Warning the foreign keys haven't been tested. So if you broke a database constraint, all operations present in the file will be rolled back.

Here is an example:

Entity Xml Data Resource Example

```
<entity-engine-xml>
  <create>
    <Example exampleId="EX13" exampleName="Example 13" exampleTypeId="INSPIRED" statusId="EXST_IN_DESIGN"/>
    <Example exampleId="EX14" exampleName="Example 14" exampleTypeId="INSPIRED" statusId="EXST_IN_DESIGN"/>
  </create>
  <create-replace>
    <Example exampleId="EX12" exampleName="Example 12 after replace" exampleTypeId="INSPIRED" statusId="EXST_IN_DESIGN"/>
  </create-replace>
  <create-update>
    <Example exampleId="EX12" exampleName="Example 11 after update" exampleTypeId="INSPIRED" statusId="EXST_IN_DESIGN"/>
  </create-update>
  <delete>
    <Example exampleId="EX09"/>
  </delete>
  <Example exampleId="EX10" exampleName="Example 10 after update"/>
</entity-engine-xml>
```

You can create your entity-engine-xml to load file with your preferred method such as:

- OpenOffice with macro
- Ftl template
- XSLT
- your preferred ETL

Load your data files in OFBiz

To load, you have four possibilities

1. By entity XML import reader : on your component indicate to load your files by with ext reader. When you want load your data, run `./ant load-ext` from your OFBiz home directory.
For instance in your component/ofbiz-component.xml:

```
<entity-resource type="data" reader-name="ext" loader="main" location="data/MyImportData.xml"/>
```

- a. See [How to preparing data](#) for more information.
2. Directly from webtools in OFBiz, go to
 - a. <https://localhost:8443/webtools/control/entityImport> to load file by file or copy/paste text
 - b. <https://localhost:8443/webtools/control/EntityImportDir> to load a directory content
 3. Call the OFBiz service **importEntityFileDirectory** if you have an automation process
 4. Directly from command line using **Gradle** command:

```
gradlew "ofbiz --load-data file=data/myimportdata.xml"
```

Note: The data file name should be lowercase only.

For all the files in the given directory:

```
gradlew "ofbiz --load-data dir=data"
```

Use the OFBiz's Data File Tools to import a CSV or tab-delimited file

It uses a map to put the data in the entity fields. This is also good for adding static data such as new products.

Here is a sample product import file row. This is a tab delimited file. If you prefer CSV (Comma Separated Values), change the delimiter to "," and the text-delimiter to """ in the XML below.

PRODUCT_ID	SKU	TITLE	CATEGORIES	IMAGE_URL	BRAND	DESCRIPTION
DETAILS	WEIGHT	DIMENSIONS	GOING	REFURB	FREIGHT	ITEM_NAME
MAP	PRICE	MSRP	QTY_AVAIL	EST_AVAIL	EXPECTED_SHIPPING_COST	
EXPECTED_DROP_SHIP_FEE		UPC	ITEM_ID			
100	213	Atwater Carey EMT Shears		leisure and sport camping/hiking accessories		
http://images.doba.com/products/2/213.jpg Atwater Carey The choice of EMTs worldwide, the 5-1/2'' trauma shears contained in all Pro Series kits or sold separately features an oversized rivet to overcome the rigors of backcountry emergencies. Identified by the bright orange handles, these shears will cut through cloth, plastic, and even light-gauge metal. 0.100000002 N N						
N	Atwater Carey EMT Shears	0	3.92	4.99	6	0000-00-00
6.63	2	7.39657E+11	100			

Here is a sample product table definition from the above import file.

```
<data-file name="Product" separator-style="delimited" type-code="UTF-8"
  delimiter="&#009;" text-delimiter=""
  description="this takes the product data from doba file"
  has-header="true">
  <record name="Product">
    <field name="productId" ignored="false" type="String"/>
    <field name="primaryProductCategoryId" expression="true"
      default-value="dropShip" type="String"/>
    <field name="productTypeId" expression="true"
      default-value="FINISHED_GOOD" type="String"/>
    <field name="sku" ignored="true" type="String"/>
    <field name="description" ignored="false" type="String"/>
    <field name="categories" ignored="true" type="String"/>
    <field name="image_url" ignored="true" type="String"/>
    <field name="brandName" ignored="false" type="String"/>
    <field name="longDescription" ignored="false" type="String"/>
    <field name="details" ignored="true" type="String"/>
    <field name="weight" ignored="false" type="String"/>
    <field name="weightUomId" expression="true" default-value="WT_lb"
      type="String"/>
    <field name="dimensions" ignored="true" type="String"/>
    <field name="going" ignored="true" type="String"/>
    <field name="refurb" ignored="true" type="String"/>
    <field name="freight" ignored="true" type="String"/>
    <field name="productName" ignored="false" type="String"/>
    <field name="map" ignored="true" type="String"/>
    <field name="price" ignored="true" type="String"/>
    <field name="msrp" ignored="true" type="String"/>
    <field name="quantityIncluded" expression="true" default-value="1"
      type="String"/>
    <field name="quantity" ignored="true" type="String"/>
    <field name="est_avail" ignored="true" type="String"/>
    <field name="expected_shipping_cost" ignored="true" type="String"/>
    <field name="expected_drop_ship_fee" ignored="true" type="String"/>
    <field name="upc" ignored="true" type="String"/>
    <field name="item_id" ignored="true" type="String"/>
    <field name="isVirtual" expression="true" default-value="N"
      type="String"/>
    <field name="isVariant" expression="true" default-value="N"
      type="String"/>
  </record>
</data-file>
```

Here is the line in entity xml

```
<Product productId="100" primaryProductCategoryId="dropShip" productTypeId="FINISHED_GOOD" internalName="213"
description="Atwater Carey EMT Shears" brandName="Atwater Carey" longDescription="The choice of EMTs worldwide,
the 5-1/2'' trauma shears contained in all Pro Series kits or sold separately features an oversized
rivet to overcome the rigors of backcountry emergencies. Identified by the bright orange handles, these shears
will cut through cloth, plastic, and even light-gauge metal.<br><br>" weight="0.1000000015"
weightUomId="WT_lb" chargeShipping="Y" productName="Atwater Carey EMT Shears" quantityIncluded="1" isVirtual="
N" returnable="Y" isVariant="N" />
```

Importing XLS files

Microsoft Excel prior to 2007 used the proprietary XLS file format. XLS files can be read by Java and Groovy applications using the [POI library](#). See [Import Data Using Apache POI api](#) and the JIRA issue [OFBIZ-1810](#) for more information.

The new XLSX format is fundamentally XML files packaged in the Zip file format. You could extract data from the XLSX file and apply an XSLT transform to create an OFBiz XML file.

You can pull the CSV into worksheet and add columns between the data

This is only good for static data like first initialization.

To add in the xml to make it an entity import. An example:

Excel row of data to import

1651143	"31090002101"	"2.4G Media Pointer/Presenter"	"computer and laptop input devices mice"	http://images.doba.com/products/4/31090002101.jpg	"Genius"	"Genius 2.4G Media Pointer, USB, Blue-black. 2.4GHz professional presenter with time management and lazer pointer. Mini receiver can be stored inside; up to 15 meters anti-interference. LCD time controller, easy to control your presentation. Integrated media functions work just like a simple remote control."	" "
"0.6000000238"	" "	N	N	N	"2.4G Media Pointer/Presenter"	0	
31.9	50.37	2	0000-00-00	7.41	0	91163218432	1969225

Same Excel row of data converted to entity data

```
<Product productId="1651143"          productTypeId="FINISHED_GOOD"  internalName="31090002101"
productName="2.4G Media Pointer/Presenter"          longDescription= "Genius 2.4G Media Pointer, USB, Blue-
black. 2.4GHz professional presenter with time management and lazer pointer.  Mini receiver can be stored
inside; up to 15 meters anti-interference. LCD time controller, easy to control your presentation. Integrated
media functions work just like a simple remote control."          weight="0.6000000238"          taxable="Y"
chargeShipping="N"          description="2.4G Media Pointer/Presenter"          autoCreateKeywords="Y"  isVirtual="
N"  isVariant="N"  />
```

Then save it as a tab delimited file.

Use an [editor](#) that and search and replace tabs(\t) with spaces().

You can import this data by using the webtool import routines.

You can do this as a file <https://localhost:8443/webtools/control/EntityImportDir> or you can so this as <https://localhost:8443/webtools/control/EntityImport>

See also [How to save customised data for import as demo data](#)