



Big Fish eCommerce

BF Admin Module Taxes.doc

Last Updated: 8-Oct-2012

TABLE OF CONTENTS

<u>1</u>	<u>Modification History</u>	3
<u>2</u>	<u>Navbar and Sub-Menu</u>	4
<u>3</u>	<u>Overview</u>	5
3.1	OFBiz Taxes: Overview	5
<u>4</u>	<u>OFBiz: Relevant Documentation</u>	6
4.1	TaxAuthority	6
4.2	TaxAuthorityAssoc & TaxAuthorityAssocType	6
4.3	TaxAuthorityCategory	6
4.4	TaxAuthorityGIAccount	6
4.5	TaxAuthorityRateType	6
4.6	TaxAuthorityRateProduct	6
4.7	PartyTaxAuthInfo	7
4.8	ProductStore	7
<u>5</u>	<u>OFBiz: Relevant Data Entities</u>	8
5.1	Introduction	8
5.2	TAX AUTHORITY	8
5.3	TAX AUTHORITY RATE PRODUCT	8
5.4	GEO (Primary)	9
5.5	GEO ASSOC	9
5.6	GEO (from Assoc)	9
5.7	PARTY	9
5.8	PARTY TAX AUTH INFO	10
<u>6</u>	<u>View Taxes</u>	11
6.1	Note to Dev	11
6.2	Search Criteria	11
6.3	Search Processing, List Results	11
6.4	Search and List UI Guideline	11
6.5	Detail UI Guideline	12

1 Modification History

Date	Who	Comments
8-Oct-12	Salmon	Initial

shipping charges & taxes

<u>View Taxes</u> View all Sales, VAT or General Use Taxes that are setup in your implementation.		
--	--	--

- NOTE:
 - this sub menu is part of the "Charges" main menu item
 - Tax sub-items should appear after any Shipping items
 - See spec "*BF Admin Modules Shipping Charges.doc*" for more information

3 Overview

3.1 OFBiz Taxes: Overview

- For BigFish:
 - it is critical that the inherent complexity is eliminated and an easy-to-use interface is presented to the client,
 - with a focus on an eCommerce implementation
 - with a focus on US State/County based tax calculations
- OFBiz has a very flexible, and complex, data model that supports Sales Tax, Value Added Tax (VAT), General Use Taxes and much more
 - data can be defined very loosely to group together any GEO groups (basically locations) into various TAX AUTHORITIES (sales tax or VAT)
 - Tax Rules can be accommodated regardless of country
 - There is built-in integration into the OFBiz Accounting Module whereby local Tax authorities report to State regulatory bodies etc.
- Outside of the US, United Kingdom and most of the other European nations (particularly those in the Euro zone) have a VAT (Value Added Tax) that is typically NOT displayed to the customer
 - VAT in the UK is included in the purchase price of the item
 - So, if an item is purchased for £10.99 that is the price that the customer will pay
 - It is the clients responsibility to extract the amount of VAT (assuming 20% this would be £1.83) – there is no requirement to identify this number

4 OFBiz: Relevant Documentation

<https://cwiki.apache.org/confluence/display/OFBTECH/OFBiz%27s+Tax+Authority+Data+Model>

4.1 TaxAuthority

The primary entity for the new tax calculation model is "TaxAuthority". In that entity there are various fields that are used to specify how the TaxAuthority operates. A TaxAuthority is identified by a Geo and a Party (the field names are taxAuthGeoId and taxAuthPartyId). We use the combination to represent the organization that is responsible for taxation and the geographic boundary it is responsible for.

The main fields on the TaxAuthority entity right now that determine operational constraints are:

- requireTaxIdForExemption: if Y then a tax ID must be on file for the customer to receive a tax exemption
- taxIdFormatPattern: constrains the format of the tax ID, uses regexp syntax
- includeTaxInPrice: for VAT style taxation, if Y sales tax will be included in prices shown to consumers

In general the TaxAuthority entity is a place for settings related to how the TaxAuthority operates, independent of categories (types) of products, and so on.

4.2 TaxAuthorityAssoc & TaxAuthorityAssocType

The TaxAuthorityAssoc and related Type entity are used to describe associations or relationships between TaxAuthorities. One example of such an association would be Exemption Inheritance where if a customer is setup to receive an exemption for one TaxAuthority then that may qualify the customer for exemptions for various other TaxAuthorities. The taxAuthorityAssocTypeId is used to define how the two tax authorities are associated.

4.3 TaxAuthorityCategory

The TaxAuthorityCategory entity is used to keep track of which ProductCategories are associated with the TaxAuthority. This is mainly to ease administration so that there is a place to attach categories that are created for taxation purposes so they can be easily referred to later, like when creating or updating a TaxAuthorityRateProduct record.

4.4 TaxAuthorityGIAccount

The TaxAuthorityGIAccount entity is used to configure which GIAccount should be used to gather sales tax transactions, and periodically balancing entries as the tax is paid to the Tax Authority organization.

4.5 TaxAuthorityRateType

The TaxAuthorityRateType entity contains information about different type of tax rates, or different types of taxes. It is used to organize the related rate entities like the TaxAuthorityRateProduct entity. Different types of rates (or taxes) include sales tax, use tax, income tax, export tax, etc.

4.6 TaxAuthorityRateProduct

The TaxAuthorityRateProduct entity is one of the more complex parts of the TaxAuthority data model. This entity is used for specifying the rate to use when the conditions for the sales tax being calculated match the settings on that record. When the tax is calculated various factors are passed in and all matching records are looked up and an adjustment (line/item level) is created for each matching record (generally one per TaxAuthority). Things that are passed in typically include:

- taxAuthGeoId & taxAuthPartyId OR shipping address(es) (and optionally billing address)
- point of title transfer (optional)
- productId
- purchase price
- order pre-tax subtotal
- productStoreId
- taxAuthorityRateTypeId

Depending on what is passed in various things may be looked up in the database, like TaxAuthorities where the internal organization has a nexus (sufficient presence for taxation) based on productStoreId -> payToPartyId and the shipping (or if no shipping then billing) address.

4.7 PartyTaxAuthInfo

The PartyTaxAuthInfo entity is used to keep track of information about the TaxAuthority for a given Party. This is used for customers as well as internal organizations (ie the company or divisions of it and such) to keep track of tax ID numbers whether the Party is tax exempt for the TaxAuthority, and also (mainly for internal organizations) if the Party has a "tax nexus" in/for the TaxAuthority. By tax nexus I mean that the organization has a sufficient presence there to be required to collect taxes on behalf of the TaxAuthority.

4.8 ProductStore

The ProductStore entity has some settings which are tax related. For stores that represent a company or division that is in a jurisdiction that uses a VAT style tax you can specify that taxes should be included in prices shown to consumers (the showPricesWithVatTax indicator) and if this is set to Y the vatTaxAuthGeoId and vatTaxAuthPartyId should be specified so that we know which TaxAuthority to calculate taxes for (in other cases this is decided based on TaxAuthorities where the company has a nexus and the order is being shipped to, or in some cases billed to if there is no shipping address).

5 OFBiz: Relevant Data Entities

5.1 Introduction

- Relevant OFBiz entities for Phase I, with data examples showing the relevant attributes, and a focus on US State Sales Tax:

5.2 TAX AUTHORITY

TAX_AUTH_GEO_ID	NY-Saratoga
TAX_AUTH_PARTY_ID	NY_DTF
TAX_AUTH_GEO_ID	NY-Suffolk
TAX_AUTH_PARTY_ID	NY_DTF

- The starting point is the TAX_AUTHORITY entity
- This defines the primary TAX_AUTH_GEO_ID within a TAX_AUTH_PARTY_ID

5.3 TAX AUTHORITY RATE PRODUCT

TAX_AUTHORITY_RATE_SEQ_ID	Saratoga
TAX_AUTH_GEO_ID	NY-Saratoga
TAX_AUTH_PARTY_ID	NY_DTF
TAX_AUTHORITY_RATE_TYPE_ID	SALES_TAX
PRODUCT_STORE_ID	GMH
PRODUCT_CATEGORY_ID	0
TAX_SHIPPING	0
TAX_PERCENTAGE	7
FROM_DATE	2005-01-01
THRU_DATE	
DESCRIPTION	NY State Sales Tax-Saratoga
TAX_AUTHORITY_RATE_SEQ_ID	Suffolk
TAX_AUTH_GEO_ID	NY-Suffolk
TAX_AUTH_PARTY_ID	NY_DTF
TAX_AUTHORITY_RATE_TYPE_ID	SALES_TAX
PRODUCT_STORE_ID	GMH
PRODUCT_CATEGORY_ID	0
TAX_SHIPPING	0
TAX_PERCENTAGE	8.625
FROM_DATE	2005-01-01
THRU_DATE	
DESCRIPTION	NY State Sales Tax-Suffolk

- For all TAX_AUTH_GEO_ID there is a rate defined
- The TAX_SHIPPING is an "indicator" (Y/N) and determines if Taxes should also be applied to the Shipping Charges
- The TAX_PERCENTAGE defines how much TAX is to be charged on the Items
- This can be defined by PRODUCT_CATEGORY_ID (future phase may support this)
- FROM_DATE and THRU_DATE can accommodate day free days, or rate increases

5.4 GEO (Primary)

GEO_ID	NY-Saratoga
GEO_TYPE_ID	COUNTY
GEO_NAME	Saratoga
GEO_CODE	Saratoga
GEO_ID	NY-Suffolk
GEO_TYPE_ID	COUNTY
GEO_NAME	Suffolk
GEO_CODE	Suffolk

5.5 GEO_ASSOC

GEO_ID	NY-Saratoga
GEO_ID_TO	USA-12020
GEO_ASSOC_TYPE_ID	REGIONS
*** and repeated for all Zip Codes in Saratoga County ***	
GEO_ID	NY-Suffolk
GEO_ID_TO	USA-11701
GEO_ASSOC_TYPE_ID	REGIONS
*** and repeated for all Zip Codes in Suffolk County ***	

- The GEO_ASSOC entity will associate a primary GEO_CODE (in this case NY-Saratoga or NY-Suffolk) within multiple granular GEO_CODES (like USA-12020 and USA-11701)
- As noted above ALL Zip Codes will be defined and grouped into the primary GEO_CODE
- The GEO_ID_TO provides a back reference to the GEO entity

5.6 GEO (from Assoc)

GEO_ID	USA-12020
GEO_TYPE_ID	POSTAL_CODE
GEO_NAME	12020
GEO_CODE	12020
GEO_ID	USA-11701
GEO_TYPE_ID	POSTAL_CODE
GEO_NAME	11701
GEO_CODE	11701

5.7 PARTY

PARTY_ID	NY_DTF
PARTY_TYPE_ID	PARTY_GROUP

- This provides a simple PARTY reference for the Tax Authority (TAX_AUTHORITY.TAX_AUTH_PARTY_ID)

5.8 PARTY TAX AUTH INFO

PARTY_ID	GMH_COMPANY
TAX_AUTH_GEO_ID	NY
TAX_AUTH_PARTY_ID	NY_DTF
PARTY_ID	GMH_COMPANY
TAX_AUTH_GEO_ID	USA
TAX_AUTH_PARTY_ID	USA_IRS

6 View Taxes

6.1 Note to Dev

- FOR THE INITIAL IMPLEMENTATION THE ADMIN MODULE WILL PROVIDE "VIEW ONLY" FUNCTIONALITY

6.2 Search Criteria

- Tax Authority
 - Displayed as a drop-down
 - Retrieve all rows from TAX_AUTHORITY and retrieve distinct TAX_AUTH_PARTY_ID attributes for the active Product Store

```
SELECT      DISTINCT (TAX_AUTH_PARTY_ID)
FROM        TAX_AUTHORITY_RATE_PRODUCT
WHERE       PRODUCT_STORE_ID = [active-product-store]
ORDER BY    TAX_AUTH_PARTY_ID
```

- Sort alphabetically and pre-select the first item in the drop-down
- In the example this would offer the value "NY_DTF"



6.3 Search Processing, List Results

- For the Tax Authority selected retrieve all rows from the TAX_AUTHORITY_RATE_PRODUCT table
- Join to GEO to retrieve the GEO_TYPE_ID Column


6.4 Search and List UI Guideline

view taxes

Enter Search Criteria:	
Tax Authority:	<input type="text" value="[drop-down]"/>
<input type="button" value="Search"/>	

<< Previous Page		Showing Rows 1-8 of 300					Next Page>>	
Matching Tax Items								
GEO ID	Rate Type	GEO Type ID	Product Category	Tax on Ship	Tax on Items	From Date	Thru Date	
NY-Saratoga	SALES_TAX	COUNTY	All	Y	7.00%	01/01/2005		
NY-Suffolk	SALES_TAX	COUNTY	All	N	8.625%	01/01/2005		

Back

-  will display the number of GEO sub-items that are associated
 - For the GEO ID in the list
 - Retrieve ALL matching items in GEO_ASSOC matching on GEO_ID
 - Display "[n] GEO sub-items are associated"
- Product Category:
 - If TAX_AUTHORITY_RATE_PRODUCT = 0 then display "All"
 - If not zero, then display the Product Category Name
- "Back", return

6.5 Detail UI Guideline

view tax detail

Tax Detail: NY-Saratoga	
GEO ID:	NY-Saratoga
Seq ID:	Saratoga
Rate Type:	SALES_TAX
GEO Type ID:	COUNTY
Product Category:	All
Tax on Ship:	Y
Tax on Items:	7.00%
From Date:	01/01/2005
Thru Date:	
Description:	NY State Sales Tax-Saratoga

Associated GEO Items				
GEO ID	Assoc Type	GEO Type ID	GEO Name	GEO Code
USA-12020	REGIONS	POSTAL_CODE	12020	12020
USA-12022	REGIONS	POSTAL_CODE	12022	12022
USA-12023	REGIONS	POSTAL_CODE	12023	12023
USA-12024	REGIONS	POSTAL_CODE	12024	12024

Back

- Associated GEO Items
 - Only show if there are matching items in GEO_ASSOC for the main GEO-ID (Ny-Saratoga)
 - For each GEO_ASSOC retrieve details from the GEO entity

- Show All, do not paginate