



BF Admin Module Entity Sync.doc

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1 Modification History

Date	Who	Comments
9-Jul-12	Salmon	Initial
17-Jan-13	Salmon	Added "Scenario" that should be used for the basis of initial prototyping

2 Processing Overview

2.1 Objective

- In an enterprise eCommerce implementation it is imperative to allow for a “synchronization” process that will gather a group of modifications to the Product Catalog, Content and other data and synchronize such changes to the LIVE environment
- Typically the process is as follows:
 - During the day, on the STAGING environment, business users make changes to the Product Catalog, Content, Promotions and other areas
 - At 2:00am each day, or a time designated by the client, the “synchronize” process will promote all changes made to the STAGING environment and update PRODUCTION
 - In another example, our clients may want to work all week on the STAGING environment, and have the synchronization process run on Friday evening for a weekend campaign
- This approach allows a client to collect and modify all content, typically targeted to a specific campaign. For example:
 - Client has special print and TV advertising starting on Saturday evening
 - This media will be promoting a new line of products, with special pricing
 - Content is modified on the STAGING server throughout the week, with a focus on highlighting the features to be advertising in the print and TV media
 - This content is “synchronized” to the PRODUCTION server during Saturday afternoon
 - When customers see the TV media and visit the website the messaging is consistent

2.2 Product Store Consideration

- The implementation MUST BE Product-Store independent
 - Clients may focus on Product-Store “A” and want to “synchronize” the data for this store WITHOUT synchronizing data for Product-Store “B”

2.3 Synchronization Process

- The Entity Sync function is accessed from the Admin -> Tools function
- **TODO: Scheduled processing to be defined**

2.4 System Parameters

- The primary parameter is ENTITY_SYNC_METHOD with the following values:

- NONE: The Entity-Sync process does NOT apply
- STAGING: This instance is the STAGING (source) server
- PRODUCTION: This instance is the PRODUCTION (target) server

2.5 Inclusions

- From a requirements point of view, the following represents the type of changes that a client can make, and these changes should be reflected within the Entity Sync process (see the Technical section for specific "entity" details):

Function	Task
Manage Catalog	Product Categories
	Sequencing
	HTML Tags
Manage Product	Products
	Pricing
	Sequencing
	HTML Tags
	Features
	Associations
	Memberships
Promotions	Promotion
	Promo Codes
Stores	All
Content	Site Info
	Home Page spots
	Static Pages
	Page Content Spots
	General PDP Content Spots
	Product Category Content
Shipping	Carriers
	Shipping Methods
	Shipping Charges
	Taxes
Labels and Captions (XML)	
Email	Configurations
	Templates
SOLR Configurations	Facet Groups
	Facet Values
Lookup Data	Contact Us Reasons
	Credit Cards
	Titles
	Review Ages
Pixel Tracking	

DIV Sequencer (XML File)	
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2.6 Exclusions

Function	Reason
System Parameters	Many parameters in STAGING will be set to "test" versions; synchronizing would override all PRODUCTION values.
Customers	Customers and related entities are NOT required. The STAGING instance will be used for final testing so Customer synchronization is not applicable.
Orders	Orders and related entities are NOT required. The STAGING instance will be used for final testing so Order synchronization is not applicable.
Ratings and Reviews	These are posted by Customers directly on the PRODUCTION instance. Not applicable.
Scheduled Jobs	Need to be setup correctly directly on PRODUCTION.
Payment Gateway Settings	Will be setup in "test" mode on STAGING. Need to be setup correctly on PRODUCTION.

2.7 XML File Synchronization

- TODO: For XML files

3 Visual Considerations

- If the instance is NOT setup for Entity-Sync (ENTITY_SYNC_METHOD = NONE) then no special visual changes are required
- If the instance IS setup for Entity-Sync (ENTITY_SYNC_METHOD = STAGING or PRODUCTION) then the primary BigFish logo should be modified as appropriate
 - This will include a clear indication of whether the instance is STAGING or PRODUCTION
 - And will apply to all themes
 - Examples:



4 Entity Sync

4.1 Overview

- Accessed from the Admin / Tools function
 - See spec "BF Admin Module Tools.doc"

4.2 UI Guideline

entity sync

[message-area]

Entity Sync

This function will review all content on your STAGING instance and synchronize to the PRODUCTION instance.

Content will include: Site Info, Home Page and all other content spots; Category and Product Details, including descriptions, pricing and features; Facet settings; Lookup Data; Payment Settings; Labels and DIV sequencing changes; and Promotions.

Back

Entity Sync

4.3 Pre-Processing

- If the parameter ENTITY_SYNC_METHOD is NOT set to "STAGING" then:

- Disable the "Entity Sync" action button
- If "NONE"

Error Message "Your instance is NOT setup for ENTITY SYNC. Contact your Administrator if this is required functionality."

- If "PRODUCTION"

Error Message "This instance is PRODUCTION. Entity Sync works by copying content FROM the STAGING instance. Please retry while logged into the Admin Module for STAGING. Contact your Administrator for more information."

4.4 Processing

- Sync!

5 Suggested Test Scenarios

5.1 Simple Test

- Step 1: Setup
 - Create 2 instances of the SAME application
 - Exactly the same products
 - Exactly the same content
 - All data should be the same
 - Nominate on instance “staging” and the other instance “production”
- Step 2: Change Data on Staging
 - Make the following changes in Staging, document each change
 - Basic Test
 - Change pricing on 2 products
 - Change descriptions on 2 products (one virtual, one variant)
 - Change the Home Page spots
 - Change a content spot used on PLP or similar
 - Enhanced Test
 - Add a product
 - Change a system parameter value
 - Change a label
- Step 3: Synchronize
 - Execute the solution to synchronize from staging to production
- Step 4: Verify
 - Verify that all changes made in Step 2 are now reflected on the Production instance
- Notes
 - It is understood that the first level of synchronization is focused on the database
 - If any images are introduced to the Staging environment then these should be copied to the production instance during the “Synchronization” step
 - Similarly for any XML changes, such as Labels

5.2 Advanced Testing

- Testing should mimic the above in terms of testing “workflow”
- Testing should include:
 - System Parameters, ensure these are NOT synchronized
 - New Products
 - Discontinued Products

- Product Features
- Pixel Tracking Scripts

5.3 XML Testing

- Testing should include
 - Labels and Captions
 - DIV Sequencing
 - **TODO: need to define**

6 Technical: OFBiz “Entity Sync” Processing

6.1 References

- For an overview of the OFBiz Entity-Sync processing:

<https://cwiki.apache.org/OFBIZ/sync-setup-notes-and-example.html>

- For a discussion on potential problems, primarily around synchronizing timestamps on the various instances AND for a explanation of an alternate approach (using a TRANSLOG), see:

http://mail-archives.apache.org/mod_mbox/ofbiz-user/201004.mbox/%3C1270662541.12556.260.camel@ghost%3E

- For an alternate approach, ECA’s may be applicable (From Vince Dec-2011):

If EntitySync doesn't accomplish what we need then I would lean more toward option 1. OFBiz entity engine lends itself nicely to this approach and keeps the process database independent. We could use ECA's (Entity, Condition, Action) on any entities we want to propagate. This would effectively be the trigger, so we wouldn't create triggers at the database level.

6.2 BigFish Approach

- Initially we should review the Entity Sync processing that is already available
- The BigFish synchronization needs to:
 - Synchronize FROM a STAGING instance to a PRODUCTION instance
 - It is ONE WAY ONLY: there is no need to synchronize from Production to Staging

6.3 Entities to Synchronize

Topic	OFBiz Entity	Comment
CATALOG	AGREEMENT_PRODUCT_APPL	?
	FIXED_ASSET_PRODUCT	?
	GOOD_IDENTIFICATION	
	INVENTORY_ITEM_TEMP_RES	?
	PRODUCT	
	PRODUCT_ASSOC	
	PRODUCT_ATTRIBUTE	
	PRODUCT_AVERAGE_COST	
	PRODUCT_CATEGORY	
	PRODUCT_CATEGORY_MEMBER	
	PRODUCT_CATEGORY_ROLLUP	
	PRODUCT_CONFIG	
	PRODUCT_CONFIG_PRODUCT	

	PRODUCT_FEATURE	
	PRODUCT_FEATURE_APPL	
	PRODUCT_FEATURE_APPL_ATTR	
	PRODUCT_FEATURE_CAT_GRP_APPL	
	PRODUCT_FEATURE_CATEGORY	
	PRODUCT_FEATURE_CATEGORY_APPL	
	PRODUCT_FEATURE_GROUP	
	PRODUCT_FEATURE_GRP_OP_APPL	
	PRODUCT_FEATURE_IACTN	
	PRODUCT_KEYWORD	
	PRODUCT_MAINT	?
	PRODUCT_MANUFACTURER_RULE	
	PRODUCT_PRICE	
	PRODUCT_ROLE	?
	PRODUCT_SUBSCRIPTION_RESOURCE	?
	SUPPLIER_PRODUCT	
	SUPPLIER_PRODUCT_FEATURE	
	VENDOR_PRODUCT	
CONTENT	PARTY_CONTENT	? what is here ?
	PRODUCT_CATEGORY_CONTENT	
	PRODUCT_CONTENT	
REVIEWS	PRODUCT_REVIEW	NO
PROMOS	PRODUCT_PROMO	
	PRODUCT_PROMO_CODE	
	PRODUCT_STORE_PROMO_APPL	
	PRODUCT_PROMO_RULE	
	PRODUCT_PROMO_COND	
	PRODUCT_PROMO_ACTION	
	PRODUCT_PROMO_CATEGORY	
	PRODUCT_PROMO_PRODUCT	
SHIPPING	Include shipping charge changes	
STORES	PARTY	Only "Stores"?
	PARTY_GROUP	
	POSTAL_ADDRESS	
	TELECOM_NUMBER	
	GEO_POINT	? redo geo-coding via scheduled job
	PARTY_CONTENT	For "opening hours" and other conter
	PARTY_CONTENT_DETAIL	
	DATA_RESOURCES	
	ELECTRONIC_TEXT	

6.4 Miscellaneous

- The following is used to reset a database when reloading Products.
- Listed for reference and for DEV to review and ensure that the entity list above is accurate.
- Items in **blue** assumed to NOT require synchronization.
 - delete from agreement_product_appl;
 - delete from cart_abandoned_line;
 - delete from communication_event_order;
 - delete from communication_event_product;
 - delete from fixed_asset_product;
 - delete from good_identification;
 - delete from inventory_item_temp_res;
 - delete from mrp_event;
 - delete from order_adjustment;
 - delete from order_attribute;
 - delete from order_attribute;
 - delete from order_contact_mech;
 - delete from order_header;
 - delete from order_header_note;
 - delete from order_item;
 - delete from order_item_ship_group;
 - delete from order_item_ship_group_assoc;
 - delete from order_notification;
 - delete from order_payment_preference;
 - delete from order_product_promo_code;
 - delete from order_role;
 - delete from order_status;
 - delete from order_summary_entry;
 - delete from party_content;
 - delete from payment;
 - delete from payment_gateway_response;
 - delete from product;
 - delete from product_assoc;
 - delete from product_attribute;
 - delete from product_average_cost; assume OFBiz uses to compute stuff?
 - delete from product_calculated_info; assume OFBiz uses to compute stuff?
 - delete from product_category where product_Category_id <> 'MODA_CATEGORY_ROOT';
 - delete from product_category_content;
 - delete from product_category_member;
 - delete from product_category_rollup;
 - delete from product_config;
 - delete from product_config_product;
 - delete from product_config_stats; ??
 - delete from product_content;
 - delete from product_cost_component_calc; assume OFBiz uses to compute stuff?
 - delete from product_facility_location; ??
 - delete from product_feature;
 - delete from product_feature_appl;
 - delete from product_feature_appl_attr;

- delete from product_feature_cat_grp_appl;
- delete from product_feature_category;
- delete from product_feature_category_appl;
- delete from product_feature_group;
- delete from product_feature_group_appl;
- delete from product_feature_iactn;
- delete from product_geo;
- delete from product_gl_account;
- delete from product_keyword;
- delete from product_maint;
- delete from product_manufacturer_rule;
- delete from product_meter;
- delete from product_order_item;
- delete from product_payment_method_type;
- delete from product_price;
- delete from product_promo_product;
- delete from product_promo_use;
- delete from product_review;
- delete from product_role;
- delete from product_subscription_resource;
- delete from shopping_list;
- delete from shopping_list_item;
- delete from supplier_product;
- delete from supplier_product_feature;
- delete from vendor_product;
- delete from work_effort_good_standard;

7 TODO / NOTES

- Admin Module: mark
- Property file ENTITY-SYNC definitions (pos-sync-settings.xml) setup on the SOURCE (staging) configuration
- TO process has a RMI process running ()
- Scenario: wrong price
- Scheduled job – ability to control by day-of-week (system parameter)
- Manual execution in admin / tools