**SOLR Configuration**

Use cases:

To configure solr.

To achieve solr configuration edit solr.impex file under

\sapbasketinitialdata\resources\sapbasketinitialdata\import\coredata\stores\sapbasket \solr.impex.



**Step 1:**

Define the macros at the beginning.

**Step 2:**

We need to insert the data to **SolrServerConfig** table with solr server configuration **name** and **mode** of the server.

INSERT\_UPDATE SolrServerConfig;name[unique=true];mode(code)

;$serverConfigName;standalone

**Step 3:**

For **standalone** solr server configuration , we must insert data to **SolrEndpointUrl** table as well to indicate the actual url where solr is running.

INSERT\_UPDATESolrEndpointUrl;solrServerConfig(name)[unique=true];url[unique=true];master[unique=true,default=false]

;$serverConfigName;http://localhost:8983/solr;true

**Step 4:** Solr index configuration

we need to insert the data to **SolrIndexConfig** table with index configuration **name**,**batch size** of indexing,**number of threads** to run and the index **mode**

INSERT\_UPDATESolrIndexConfig;name[unique=true];batchSize;numberOfThreads;indexMode(code);

;$indexConfigName;100;1;TWO\_PHASE;[Copy this code](javascript:;)

We have defined the batch size to be **100**  
**1 thread** for processing index and  
**TWO\_PHASE** as the indexing strategy.

**Step 5**: Solr Search configuration.

we need to insert the data to **SolrSearchConfig** table with **page size** and **description**

INSERT\_UPDATE SolrSearchConfig;description[unique=true];pageSize

;$searchConfigName;20

**Step 6:** Define solr indexed type.

We need to define the hybris **item types** to be **indexed** in the **SolrIndexedType** table and also define the sort references according to the requirement.

For sapbasket I have defined sort references for name(ascending and descending) and price(ascending and descending).

INSERT\_UPDATESolrIndexedType;identifier[unique=true];type(code);variant;sorts(&sortRefID)

;$solrIndexedType;Product;false;sortRef1,sortRef2,sortRef3,sortRef4

#### Step 7: **Solr Facet Search Config**

#### We need to insert the data to ****SolrFacetSearchConfig**** table to define ****index name prefix,currencies**** and also link the solrServerConfig, solrSearchConfig, solrIndexConfig, solrIndexedTypes defined above.

#### **INSERT\_UPDATESolrFacetSearchConfig;name[unique=true];description;indexNamePrefix;languages(isocode);currencies(isocode);solrServerConfig(name);solrSearchConfig(description);solrIndexConfig(name);solrIndexedTypes(identifier);enabledLanguageFallbackMechanism;$catalogVersions**

#### **;$facetSearchConfigName;$facetSearchConfigDescription;$searchIndexNamePrefix;$indexLanguages;$indexCurrencies;$serverConfigName;$searchConfigName;$indexConfigName;$solrIndexedType;true;$productCatalog:Online,$productCatalog:Staged**

#### ****Step 8**: Link the solr to the site**

#### We need to link the solr configuration to the site by providing ****solrFacetSearchConfiguration**** to the Base site as below

#### **UPDATE BaseSite;uid[unique=true];solrFacetSearchConfiguration(name)**

;$indexBaseSite;$facetSearchConfigName

#### ****Step 9**: Defining the range value set**

#### We need to insert the data to ****SolrValueRangeSet**** table for defining the Solr value ****range references**** which we will define in the next impex.

#### ****INSERT\_UPDATESolrValueRangeSet;name[unique=true];qualifier;type;solrValueRanges(&rangeValueRefID)****

#### ****;**sapbasketPriceRangeINR;INR;double;rangeRefINR1,rangeRefINR2,rangeRefINR3,rangeRefINR4,rangeRefINR5,rangeRefINR6,rangeRefINR7,rangeRefINR8,rangeRefINR9,rangeRefINR10,rangeRefINR11,rangeRefINR12,rangeRefINR13**

#### ****Step 10:**** **Defining the range value set**

#### We need to insert the data for ****SolrValueRange**** table to define the actual range values for each range reference according to the requirement as below

#### INSERT\_UPDATE SolrValueRange;&rangeValueRefID;solrValueRangeSet(name)[unique=true];name[unique=true];from;to

#### ;rangeRefINR1 ;sapbasketPriceRangeINR; ₹0-₹20; 0; 20

#### ;rangeRefINR2 ;sapbasketPriceRangeINR; ₹20-₹50; 21; 50

#### ;rangeRefINR3 ;sapbasketPriceRangeINR; ₹50-₹100; 51; 100

#### ;rangeRefINR4 ;sapbasketPriceRangeINR; ₹100-₹200; 101;200

#### ;rangeRefINR5 ;sapbasketPriceRangeINR; ₹200-₹300; 201;300

#### ;rangeRefINR6 ;sapbasketPriceRangeINR; ₹300-₹400; 301;400

#### ;rangeRefINR7 ;sapbasketPriceRangeINR; ₹400-₹500; 401;500

#### ; rangeRefINR8 ;sapbasketPriceRangeINR; ₹500-₹600; 501;600

#### ;rangeRefINR9 ;sapbasketPriceRangeINR; ₹600-₹700; 601;700

#### ;rangeRefINR10;sapbasketPriceRangeINR; ₹700-₹800; 701;800

#### ;rangeRefINR11;sapbasketPriceRangeINR; ₹800-₹900; 801;900

#### ;rangeRefINR12;sapbasketPriceRangeINR; ₹900-₹1000; 901;1000

#### ****Step 11**: Define the non-facet indexed properties**

We need to insert the data into **SolrIndexedProperty** table for defining the **properties** of item types to be **indexed**.

We need to define different features for each **property** on how it should be indexed, whether it has to be **multivalued,used for autocomplete** etc.

INSERT\_UPDATE SolrIndexedProperty;solrIndexedType(identifier)[unique=true];name[unique=true];type(code);sortableType(code);currency[default=false];localized[default=false];multiValue[default=false];useForSpellchecking[default=false];useForAutocomplete[default=false];fieldValueProvider;valueProviderParameters[map-delimiter=|];ftsPhraseQuery[default=false];ftsPhraseQueryBoost;ftsQuery[default=false];ftsQueryBoost;ftsFuzzyQuery[default=false];ftsFuzzyQueryBoost;ftsWildcardQuery[default=false];ftsWildcardQueryType(code)[default=POSTFIX];ftsWildcardQueryBoost;ftsWildcardQueryMinTermLength

;$solrIndexedType; itemtype ;string ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ;;

;$solrIndexedType; code ;string ; ; ; ; ;TRUE;TRUE; ; ; ; ;TRUE;90 ; ; ;TRUE;POSTFIX;45;3

;$solrIndexedType; name ;text ;sortabletext; ;TRUE; ;TRUE;TRUE; ; ;TRUE;100;TRUE;50 ;TRUE;25; ; ; ;

;$solrIndexedType; description ;text ; ; ;TRUE; ; ; ; ; ; ; ; ; ; ; ; ; ; ;

;$solrIndexedType; summary ;text ; ; ;TRUE; ; ; ; ; ; ; ; ; ; ; ; ; ; ;

;$solrIndexedType; manufacturerName ;text ; ; ; ; ;TRUE;TRUE; ; ;TRUE;80 ;TRUE;40 ;TRUE;20; ; ; ;

;$solrIndexedType; manufacturerAID ;string ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ;

#### **Here I have used out of box value providers provided by hybris.**

#### ****Step 12**: Define the facet-indexed properties.**

#### ****Facet properties**** are generally displayed at the ****sidebar**** of the site where we can select those ****facet fields**** to get the list of products accordingly.

#### **INSERT\_UPDATE SolrIndexedProperty;solrIndexedType(identifier)[unique=true];name[unique=true];type(code);multiValue[default=true];facet[default=true];facetType(code);facetSort(code);priority;visible;categoryField[default=true];fieldValueProvider;facetDisplayNameProvider;topValuesProvider**

#### **;$solrIndexedType; allCategories ;string;;;Refine;Alpha;-9999;false;;categoryCodeValueProvider ;**

#### **;$solrIndexedType; categoryPath ;string;;;Refine;Alpha;-9999;false;false;categoryPathValueProvider ;**

#### **;$solrIndexedType; category ;string;;;Refine;Alpha; 6000;true;;sapbasketCategoryCodeValueProvider ;categoryFacetDisplayNameProvider;defaultTopValuesProvider**

#### **;$solrIndexedType; brand ;string;;;Refine;Alpha; 5000;true;;sapbasketBrandCategoryCodeValueProvider ;categoryFacetDisplayNameProvider;defaultTopValuesProvider**

#### **As the part of facet search I have included**

#### **1.Shop by category.**

#### **2.Shop by brand.**

#### **3.Shop by price**

#### **Here register the bean id for value provider in sapbasketcore-spring.xml file under**

#### **sapbasketcore\resources\sapbasketcore-spring.xml**

#### 

#### **<bean id="sapbasketCategoryCodeValueProvider" parent="abstractCategoryCodeValueProvider">**

#### **<property name="categorySource" ref="sapbasketCategorySource"/>**

#### **</bean>**

#### **<bean id="sapbasketBrandCategoryNameValueProvider" parent="abstractCategoryNameValueProvider">**

#### **<property name="categorySource" ref="sapbasketBrandCategorySource"/>**

#### **</bean>**

#### **Here we are using out of the box parent class that is provided by the hybris to define the value provider.**

#### **To define this we need to provide a category source from which the classification of categories and brands are done.**

#### **Define the category source in same file.**

#### **<bean id="sapbasketCategorySource" parent="abstractCategorySource">**

#### **<property name="rootCategory" value="Food"/>**

#### **</bean>**

#### **<bean id="sapbasketBrandCategorySource" parent="abstractCategorySource">**

#### **<property name="rootCategory" value="Brands"/>**

#### **</bean>**

#### **Here we are classifying the categories and brands using root category.**

#### **For categories we are using root category as Food(It is the supercategory for all categories and can be found in categories.impex).**

#### **For brands we are using root category as Brands(It is the supercategory for all the brands and can be found in categories.impex).**

#### **For shop by price there is out of the box value provider provided by hybris.**

#### **Add below lines in solr.impex**

#### **INSERT\_UPDATE SolrIndexedProperty;solrIndexedType(identifier)[unique=true];name[unique=true];type(code);sortableType(code);currency[default=false];localized[default=false];multiValue[default=false];facet[default=true];facetType(code);facetSort(code);priority;visible;useForSpellchecking[default=false];useForAutocomplete[default=false];fieldValueProvider;facetDisplayNameProvider;customFacetSortProvider;topValuesProvider;rangeSets(name)**

#### **;$solrIndexedType; price ;double ; ;true ; ; ; ;MultiSelectOr ;Alpha ; 4000;true; ; ;productPriceValueProvider**

#### ****Step 13**: Define facet fields in global navigation bar.**

#### **Add the below lines in solr.impex file to get the category field in global navigation bar.**

#### **INSERT\_UPDATE SolrIndexedProperty;solrIndexedType(identifier)[unique=true];name[unique=true];type(code);localized[default=false];multiValue[default=true];categoryField[default=true];useForSpellchecking[default=false];useForAutocomplete[default=false];fieldValueProvider;ftsPhraseQuery[default=false];ftsPhraseQueryBoost;ftsQuery[default=false];ftsQueryBoost;ftsFuzzyQuery[default=false];ftsFuzzyQueryBoost**

#### **;$solrIndexedType; categoryName ;text ;true;;;true;true;sapbasketCategoryNameValueProvider ;true;40;true;20;true;10**

#### **Register the bean id for value provider in sapbasketcore-spring.xml file under**

#### **sapbasketcore\resources\sapbasketcore-spring.xml**

#### **<bean id="sapbasketCategoryNameValueProvider" parent="abstractCategoryNameValueProvider">**

#### **<property name="categorySource" ref="sapbasketCategorySource"/>**

#### **</bean>**

#### **Define the category source in same file.**

#### **<bean id="sapbasketCategorySource" parent="abstractCategorySource">**

#### **<property name="rootCategory" value="Food"/>**

#### **</bean>**

#### ****Step 14:****

#### We need to define the ****indexed queries**** for ****full index**** and ****update index**** so that solr picks up the corresponding source data from hybris for indexing.

#### **INSERT\_UPDATE SolrIndexerQuery;solrIndexedType(identifier)[unique=true];identifier[unique=true];type(code);injectCurrentDate[default=true];injectCurrentTime[default=true];injectLastIndexTime[default=true];query;user(uid)**

#### **;$solrIndexedType;$searchIndexNamePrefix-fullQuery;full;;;false;"SELECT {p:PK} FROM {Product AS p} WHERE {p:varianttype} IS NOT NULL";anonymous**

#### **;$solrIndexedType;$searchIndexNamePrefix-updateQuery;update;;;;"**

#### **SELECT DISTINCT tbl.pk, tbl.code FROM (**

#### **{{**

#### **SELECT DISTINCT {p:PK} AS pk, {p:code} AS code**

#### **FROM {Product AS p LEFT JOIN CustomerReview AS cr ON {cr:product}={p:PK} }**

#### **WHERE {p:varianttype} IS NOT NULL AND ({p:modifiedtime} >= ?lastIndexTime OR {cr:modifiedtime} >= ?lastIndexTime)**

#### **}}**

#### **UNION**

#### **{{**

#### **SELECT DISTINCT {p:PK} AS pk, {p:code} AS code**

#### **FROM {VariantProduct AS p JOIN Product AS bp1 ON {p:baseProduct}={bp1:PK} LEFT JOIN CustomerReview AS cr ON {cr:product}={bp1:PK} }**

#### **WHERE {p:varianttype} IS NOT NULL AND ({bp1:modifiedtime} >= ?lastIndexTime OR {cr:modifiedtime} >= ?lastIndexTime)**

#### **}}**

#### **UNION**

#### **{{**

#### **SELECT DISTINCT {p:PK} AS pk, {p:code} AS code**

#### **FROM {VariantProduct AS p JOIN VariantProduct AS bp1 ON {p:baseProduct}={bp1:PK} JOIN Product AS bp2 ON {bp1:baseProduct}={bp2:PK} LEFT JOIN CustomerReview AS cr ON {cr:product}={bp2:PK} }**

#### **WHERE {p:varianttype} IS NOT NULL AND ({bp2:modifiedtime} >= ?lastIndexTime OR {cr:modifiedtime} >= ?lastIndexTime)**

#### **}}**

#### **UNION**

#### **{{**

#### **SELECT {p:PK} AS pk, {p:code} AS code FROM {Product AS p} WHERE {p:code} IN (**

#### **{{**

#### **SELECT DISTINCT {sl:productCode} FROM {StockLevel AS sl} WHERE {sl:modifiedtime} >= ?lastIndexTime**

#### **}}**

#### **)**

#### **}}**

#### **) tbl ORDER BY tbl.code**

#### **";anonymous**

#### ****Step 15**: Defining the sort**

#### We need to insert the ****sort references**** into ****SolrSort**** table which we will be using while inserting values for ****SolrIndexedType**** to define the sorts for the indexed item type

#### **INSERT\_UPDATE SolrSort;&sortRefID;indexedType(identifier)[unique=true];code[unique=true];useBoost**

#### **;sortRef1;$solrIndexedType;name-asc;false**

#### **;sortRef2;$solrIndexedType;name-desc;false**

#### **;sortRef3;$solrIndexedType;price-asc;false**

#### **;sortRef4;$solrIndexedType;price-desc;false**

#### ****Step 16**: Define the solr sort fields**

#### We need to insert the sorting fields into ****SolrSortField**** table which will be linked to the sort reference codes defined above

#### **INSERT\_UPDATE SolrSortField;sort(indexedType(identifier),code)[unique=true];fieldName[unique=true];ascending[unique=true]**

#### **;$solrIndexedType:name-asc;name;true**

#### **;$solrIndexedType:name-desc;name;false**

#### **;$solrIndexedType:price-asc;priceValue;true**

#### **;$solrIndexedType:price-desc;priceValue;false**

#### **These are the steps to achieve solr configuration.**

#### ****Step17:** Add content slots and respective components in cms-content.impex**

#### **under sapbasketinitialdata\resources\sapbasketinitialdata\import\coredata\contentCatalogs\sapbasketContentCatalog\cms-content.impex**

#### **a)Add content slot**

#### **INSERT\_UPDATEContentSlot;$contentCV[unique=true];uid[unique=true];cmsComponents(uid,$contentCV)**

#### **;;ProductLeftRefinements;RefinementFacetComponent**

#### **b) add CMScomponent relative to the slot**

#### **INSERT\_UPDATE ProductRefinementComponent;$contentCV[unique=true];uid[unique=true];name;&componentRef**

#### **;;RefinementFacetComponent;Product Refinement Facet Component;RefinementFacetComponent**