



WOWODC '011

MONTREAL 1/3 JULY 2011



Custom EOAdaptors (Plus ERSolr!)

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Custom EOAdaptors

- EOAdaptors connect EOF to a data store
- SQL stores most common
- Used to need an adaptor per database
- JDBC made this a lot easier - Plugins

Why Build a Custom EOAdaptor?

- You have to.
- You're insane.

No SQL?

- Voldemort
- Neo4J
- Lucene
- Solr
- Cassandra
- That other thing...

Basic Requirements

- Schema support
- Query language (EOQualifiers)

Here Be Dragons

- WebObjects wiki has a high level overview:
<http://wiki.objectstyle.org/confluence/display/WO/EOF-Using+EOF-Custom+EOAdaptor>
- Create new Wonder framework
- EOAdaptor subclass: set up connection and adaptor context
- EOAdaptorContext subclass: set up transactions and adaptor channel
- EOAdaptorChannel subclass: where you actually do stuff

EOAdaptorChannel

- Delete
- Insert
- Update
- Select

ERSolr

- Custom EOAdaptor
- Allows you to use Solr with EOF
- Entity Modeler, EOQualifiers, etc.

What is Solr?

- Apache project, part of Apache Lucene
- Uses Lucene index
- Adds support for schemas, facet querying, sharding, replication, superset of Lucene Query Language
- Deploys in any servlet container, comes with Jetty
- JSON “resty” interface / Java API
- Scales like crazy

WTH is a facet?

Age Range

- Birth to 24 Months (28)
- 2 to 4 Years (499)
- 5 Years & Up (108)
- 8 Years & Up (17)
- 12 Years & Up (1)
- Grownups (9)

Featured Characters


- Disney Cars (2,361)
- Toy Story (1,044)
- Disney Cars: Lightning McQueen (426)
- Disney Cars: Tow Mater (275)
- Toy Story: Buzz (236)
- Toy Story: Woody (181)
- Disney Cars: Ramone (109)
- [See more...](#)


Characters

- Lightning McQueen (2,361)
- Tow Mater (1,044)
- Lightning McQueen (426)
- Tow Mater (275)
- Buzz (236)
- Woody (181)
- Ramone (109)

Related Searches: [pixar up](#)

Showing 1 - 24 of 5,123 Results

1. 
Cars Mack Hauler
Buy new: **\$19.50**
31 new from **\$13.50**
Only 2 left in stock - order soon.
★★★★☆ (46)
Manufacturer recommended age: 36 Months - 8 Years
[Show only Mattel items](#)

4. 

ERSolr

- Allows you model Solr schema with Entity Modeler (including multi-value fields)
- Solr specific prototypes
- Use EOQualifiers to query Solr, true batching
- EOSortOrderings
- ERXSolrFetchSpecification: support for facets, other Solr features

Entity Modeler

The screenshot displays the Entity Modeler application interface. The main window title is "Entity Modeler - ERSolrExample/Resources/ERSolrExample.eomodeld/index.eomodeld - Eclipse SDK - /Users/tbritt/Projects/workspace".

Outline View: Shows a tree structure for the "ERSolrExample" project. Under "Inventory", there are attributes: "category", "features", "id", "inStock", "manufacturer", "name", "popularity", "price", "sku", and "weight". There is also a "Default" folder and "erprototypes".

Properties View: Shows the properties for the selected "id" attribute. The "Basic" tab is active, showing a table of properties:

Key	Type	Value
Root	Dictionary	(3 items)
indexed	String	true
isMultiValue	String	false
stored	String	true

Data Tables View: Shows a table of data for the "Inventory" entity. The table has columns: Prototype, Name, Column Name, External Width, Precision, and Scale.

Prototype	Name	Column Name	External Width	Precision	Scale
varcharLarge	category	cat	10000000		
varcharLarge	features	features	10000000		
id	id	id			
boolean	inStock	inStock	5		
varcharLarge	manufacturer	manu	10000000		
varcharLarge	name	name	10000000		
intNumber	popularity	popularity			
doubleNumber	price	price			
varcharLarge	sku	sku	10000000		
doubleNumber	weight	weight			

Entities View: Shows a table for the "Inventory" entity with columns: Name, Destination, Source Attribute, and Destination Attribute.

Name	Destination	Source Attribute	Destination Attribute
------	-------------	------------------	-----------------------

The status bar at the bottom shows "116M of 266M" memory usage.

ERXSolrFetchSpecification

```
ERXSolrFetchSpecification fetchSpecification = new ERXSolrFetchSpecification<Inventory>(Inventory.ENTITY_NAME);
fetchSpecification.setBatchSize(5);

// Field Facets
fetchSpecification.addFacet(SolrFacet.newSolrFacet(Inventory.IN_STOCK_KEY));

// Query Facets
SolrFacet priceQueryFacet = SolrFacet.newSolrFacet(Inventory.PRICE_KEY);
priceQueryFacet.addQualifierForKey(Inventory.PRICE.lessThanOrEqualTo(100), "Low Price");
priceQueryFacet.addQualifierForKey(Inventory.PRICE.greaterThan(100), "High Price");
fetchSpecification.addFacet(priceQueryFacet);

// Put results in a display group
ERXDisplayGroup displayGroup = new ERXDisplayGroup<Inventory>();
displayGroup.setObjectArray(fetchSpecification.result().objects());
```

Get Facet Results

```
for (SolrFacet facet : fetchSpecification.facets()) {  
    NSArray<FacetItem> facetItems = fetchSpecification.result().itemCounts(facet.key());  
    for (FacetItem facetItem : facetItems) {  
        String displayValue = facetItem.key();  
        Number count = facetItem.count();  
    }  
}
```


ERXSolrFetchSpecification

- `ERXSolrFetchSpecification.queryTime()`
- `ERXSolrFetchSpecification.maxTime()`
- `ERXSolrFetchSpecification.batchNumber()`
- `ERXSolrFetchSpecification.defaultFacetLimit()`
- `ERXSolrFetchSpecification.defaultMinFacetSize()`

Other Stuff

- Result Scoring
- Field statistics
- Facet pivoting

DEMO

(get ready to live!)

ERSolr Example

Price

- High Price (9)
- Low Price (7)

Weight

- 50 lbs or under (6)
- Over 50 lbs (3)

In Stock

- true (13)
- false (4)

Popularity

- 6 (5)
- 7 (4)
- 1 (2)
- 10 (2)
- 0 (1)
- 5 (1)

PK	Price	SKU	Name	Category	Features	In Stock?	Manufacturer	Popularity	Weight
GB18030TEST	0.0		Test with some GB18030 encoded characters		[No accents here, 这是一个功能, This is a feature (translated), 这份文件是很有光泽, This document is very shiny (translated)]	true			
SP2514N	92.0		Samsung SpinPoint P120 SP2514N - hard drive - 250 GB - ATA-133		[7200RPM, 8MB cache, IDE Ultra ATA-133, NoiseGuard, SilentSeek technology, Fluid Dynamic Bearing (FDB) motor]	true		6	
6H500F0	350.0		Maxtor DiamondMax 11 - hard drive - 500 GB - SATA-300		[SATA 3.0Gb/s, NCQ, 8.5ms seek, 16MB cache]	true		6	
F8V7067-APL-KIT	19.95		Belkin Mobile Power Cord for iPod w/ Dock		[car power adapter, white]	false		1	4.0
IW-02	11.5		iPod & iPod Mini USB 2.0 Cable		[car power adapter for iPod, white]	false		1	2.0

< Prev 1 2 3 4 Next >

(1-5 of 17 items)

Where is this thing?

- If you're watching this presentation in the future, it's probably in Wonder.
- Right now it's here:

<https://github.com/tbritt/ERSolr>



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Q&A