

# Multi Tenancy to Completion

May 30, 2017

## 1 The Problem

FoxCommerce platform has been moving towards multi-tenancy and is almost there. There are a couple of remaining issues that need to be addressed for the system to be completely multi tenant.

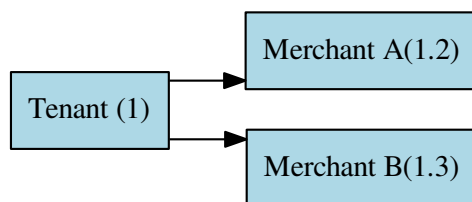
## 2 What We Have

### 2.1 Organizations

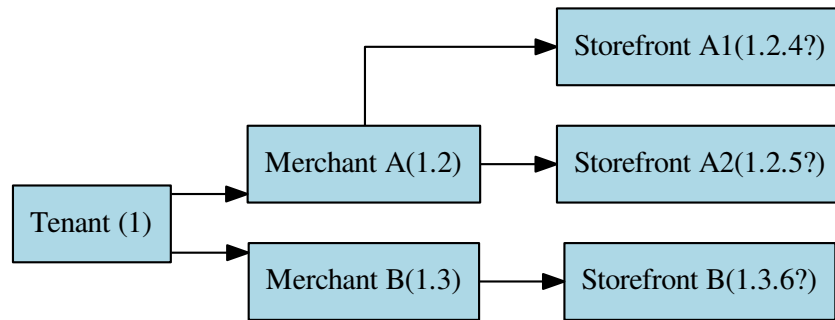
We have a model of organizations which have roles and permissions and users. Organizations are associated with a specific scope. Scopes provide a way to organize data hierarchically and limit access.

### 2.2 Scopes

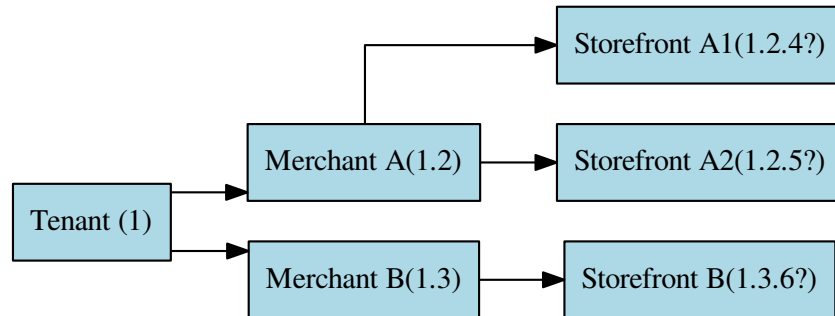
Almost all tables in the system have a scope column. Scopes are hierarchical organization of data like a filesystem tree. Users with access to a scope do not have access to the parent scope.



Each merchant may have one or more storefronts. The question of whether the data of those storefronts is scoped depends on the use cases we want to enable. Is a different organization managing the other storefronts? Then we probably want this



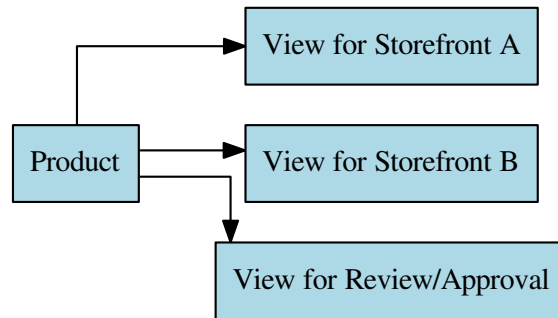
Is the same organization managing various storefronts? Then we want this.



Notice that the scope of the storefronts is the same. Regardless if we have one organization or another we need a different organizing structure for storefront data that is separate from scopes. We want a model of channels.

## 2.3 Views (formally Context)

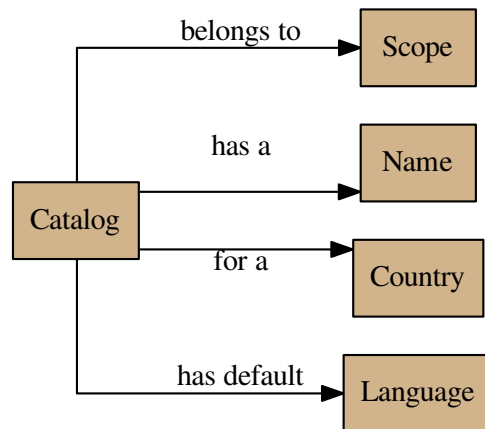
All merchandising information can have several views. Views provide a way to change the information of a product, sku, discount, or other merchandising data for a specific purpose. For example, each storefront could possibly have a different view of a product. A review/approval flow may have it's own view.



## 3 What We Need

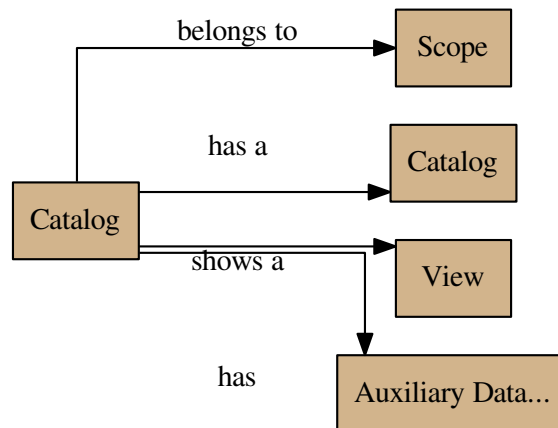
### 3.1 Catalogs

Catalogs are collections of products you want to sell.



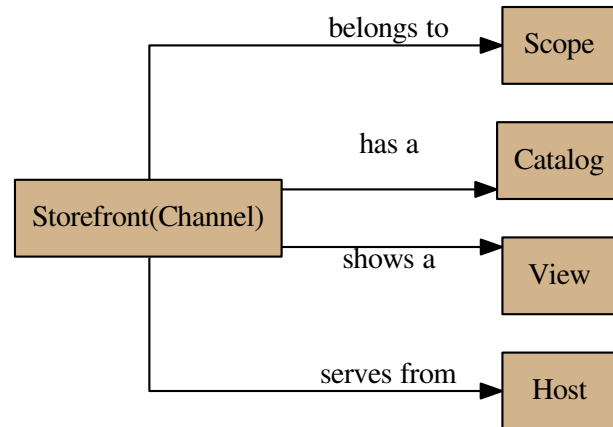
### 3.2 Channels

Channels should be comprised of three key components



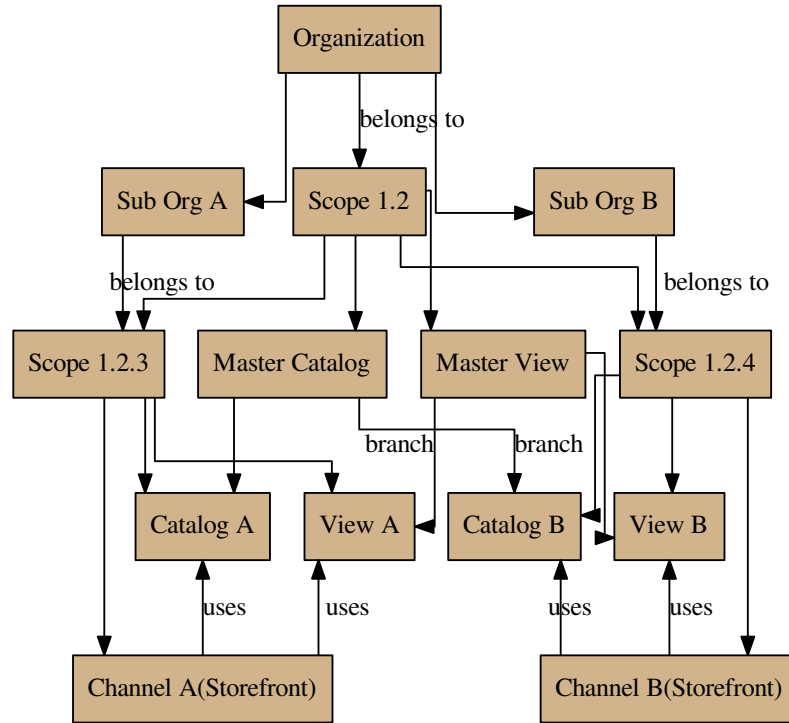
### 3.3 Storefronts

One type of channel is a storefront, We can either create a first class item or use the auxiliary data in the channel.



### 3.4 Back to Organizations

Once we have these new models we can assign them to organizations



### 3.5 Public Access

Our current public endpoints for searching the catalog, registering users, and viewing/purchasing products are not multi-tenant aware at the moment. We need to modify them to understand which channel they are serving.

