The IdentifierBundle - who is requesting authorization?

The policy interface has a single method, and looks like this:

```
public interface PolicyIface  {
    public PolicyDecision isAuthorized(IdentifierBundle whoToAuth, RequestedAction whatToAuth);
}
```

The nature of `whatToAuth` is covered in Creating a VIVO authorization policy - an example and A more elaborate authorization policy. This page is about `whoToAuth`.

The challenge of identity and authorization

A user's level of authorization may depend on a variety of information:

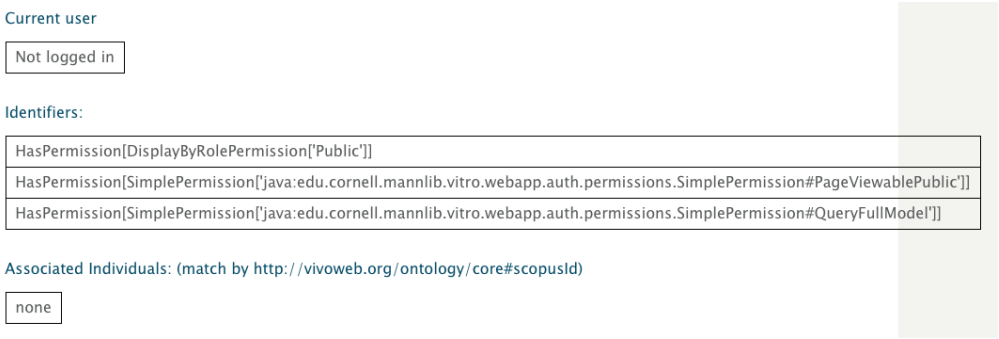
- are they logged in?
- what is their role?
- do they have a profile page?
- what information is in their profile page?
- do they have "proxy authorization" to edit additional pages?

These questions are made more complex because this information is stored in multiple data models. Also, the policy does not have access to the current request or session, so it is not always easy to obtain information.

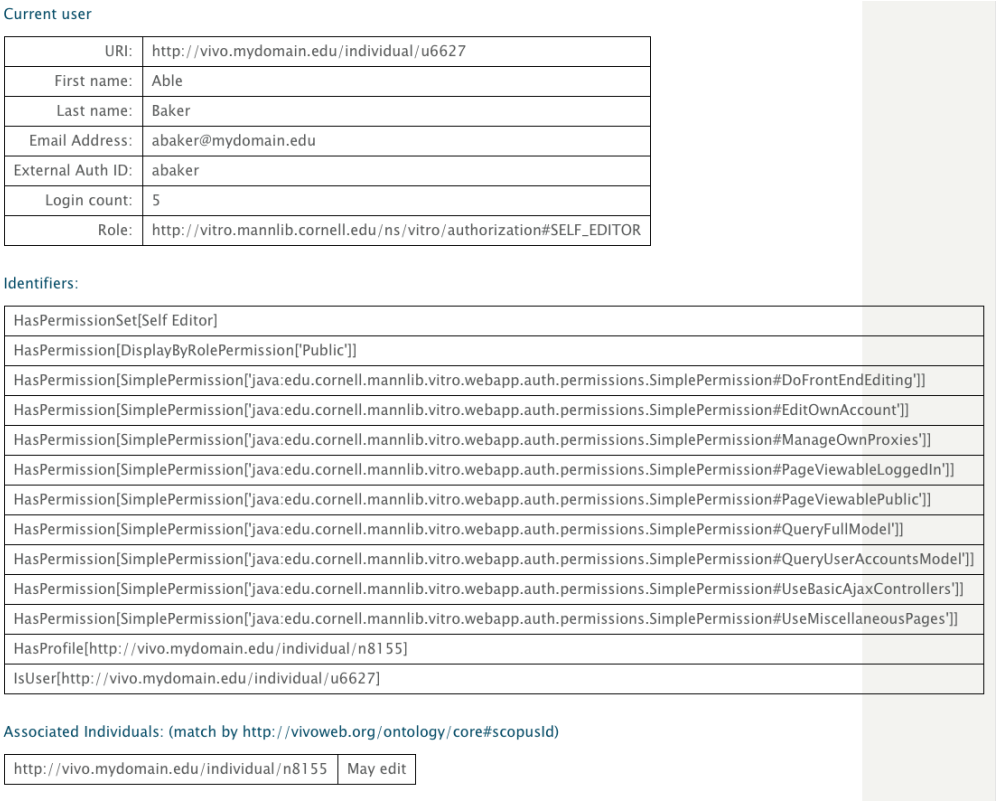
The IdentifierBundle to the rescue

Notice that the `isAuthorized` method receives an argument of the type `IdentifierBundle`. This consists of many `Identifier` objects, and each `Identifier` contains a small piece of information about the current user.

You can see the contents of this bundle (as well as many other things) by directing your browser to `/vivo/admin/showAuth`. This screen shot shows information about an anonymous (not logged in) session:



And this one shows information about a user who is logged in as a self-editor.



Current user

URI:	http://vivo.mydomain.edu/individual/u6627
First name:	Able
Last name:	Baker
Email Address:	abaker@mydomain.edu
External Auth ID:	abaker
Login count:	5
Role:	http://vitro.mannlib.cornell.edu/ns/vitro/authorization#SELF_EDITOR

Identifiers:

HasPermissionSet[Self Editor]
HasPermission[DisplayByRolePermission['Public']]
HasPermission[SimplePermission['java:edu.cornell.mannlib.vitro.webapp.auth.permissions.SimplePermission#DoFrontEndEditing']]
HasPermission[SimplePermission['java:edu.cornell.mannlib.vitro.webapp.auth.permissions.SimplePermission#EditOwnAccount']]
HasPermission[SimplePermission['java:edu.cornell.mannlib.vitro.webapp.auth.permissions.SimplePermission#ManageOwnProxies']]
HasPermission[SimplePermission['java:edu.cornell.mannlib.vitro.webapp.auth.permissions.SimplePermission#PageViewableLoggedIn']]
HasPermission[SimplePermission['java:edu.cornell.mannlib.vitro.webapp.auth.permissions.SimplePermission#PageViewablePublic']]
HasPermission[SimplePermission['java:edu.cornell.mannlib.vitro.webapp.auth.permissions.SimplePermission#QueryFullModel']]
HasPermission[SimplePermission['java:edu.cornell.mannlib.vitro.webapp.auth.permissions.SimplePermission#QueryUserAccountsModel']]
HasPermission[SimplePermission['java:edu.cornell.mannlib.vitro.webapp.auth.permissions.SimplePermission#UseBasicAjaxControllers']]
HasPermission[SimplePermission['java:edu.cornell.mannlib.vitro.webapp.auth.permissions.SimplePermission#UseMiscellaneousPages']]
HasProfile[http://vivo.mydomain.edu/individual/n8155]
IsUser[http://vivo.mydomain.edu/individual/u6627]

Associated Individuals: (match by http://vivoweb.org/ontology/core#scopusId)

http://vivo.mydomain.edu/individual/n8155	May edit

Your policy has access to these `Identifier` objects, and the `Identifier` classes have static methods that make it easier to find the information you want.

For example, in `edu.cornell.mannlib.vitro.webapp.auth.identifier.common.IsUser`

```
    String userUri = null;
    Collection<String> userUris = IsUser.getUserUris(whoToAuth);
    if (!userUris.isEmpty()) {
        userUri = userUris.iterator().next();
    }
    // null means not logged in.
    // Non-null is the URI of the user account.
```

And, in `edu.cornell.mannlib.vitro.webapp.auth.identifier.common.HasProfile`

```
    String profileUri = null;
    Collection<String> profileUris = HasProfile.getProfileUris(whoToAuth);
    if (!profileUris.isEmpty()) {
        profileUri = profileUris.iterator().next();
    }
    // null means either not logged in, or no profile.
    // Non-null is the URI of the profile page.
```

In most cases, the policy is more interested in the URI of the profile page, rather than the URI of the user account. However, either one might come in handy.

It might be worth noting that `HasProfile` and `HasProxyEditingRights` are both subclasses of `HasAssociatedIndividual`. That means that you can easily distinguish between them, or not, according to the needs of your particular policy.