

University of Wisconsin - Madison

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Use Case 1: External Authentication and Authorization

Title (goal)	External Authentication and Authorization
Primary Actor	developer, consuming applications
Scope	Organizational, black box
Level	
Story	<p>1. User on a browser clicks on a link to see information about a digital object in Fedora. The request will pass through a few layers of front-end applications before it reaches Fedora.</p> <ul style="list-style-type: none">◦ No user information is submitted with the request; it's an anonymous request from an unauthenticated user. <p>2. Fedora receives the anonymous request for the resource (object, datastream, datastream metadata, etc.). It asks the external PDP if this resource is accessible; no role attributes are delivered to the PDP (an anonymous, public request).</p> <ul style="list-style-type: none">◦ Is the source IP for the request is passed along, for access control?◦ PDP needs access to the object; policy may be evaluated based on a properties of the object. <p>a. Resource is available: PDP responds with "yes". Fedora sends back the requested resource, with a HTTP 200 response code. Work is done.</p> <p>b. Resource has restricted access. PDP responds with "no". Fedora sends back a HTTP 401: Unauthorized.</p> <p>At this point, the front-end application decides what to do with that 401: in our case, it will redirect the user to an authenticating web service, protected by Shibboleth; the authentication web service will do the Shibboleth dance, then redirect the user back to the front end web application, with user attributes included.</p> <p>3. The front-end web application will re-request the resource from Fedora, this time with user attribute information.</p> <p>4. Fedora receives the authenticated request for the resource. It asks the PDP again if the resource is accessible, this time passing along user attributes.</p> <p>a. Resource is available to the user: PDP responds with "yes". Fedora sends back the requested resource, with a HTTP 200 response code. Work is done.</p> <p>b. Resource is not available to the user: PDP responds with "no". Fedora sends back a HTTP 403: Forbidden (final, request should not be re-submitted).</p> <p>At this point, the front-end application decides what to do with the 403: show an error page, mask with a 404, etc.</p>

Use Case 2: Resource Index/Triplestore queries

Title (goal)	Obtain filtered list of objects
Primary Actor	administrator, consuming applications
Scope	component
Level	

Story	<p>An administrator or piece of software needs to get a list of all the top-level objects in a particular collection, or created under the auspices of a given project.</p> <p>They run the following ITQL query against the Resource Index:</p> <pre>select \$fco from <#ri> where \$fco <info:fedora/fedora-system:def/model#hasModel> <info:fedora/1711.dl:CModelFirstClassObject> and \$fco <http://digital.library.wisc.edu/1711.dl/rdf/1.0/relations#isMemberOfProject> <hdl:1711.dl/AfricaFocus></pre> <p>where the project ID is "AfricaFocus".</p> <p>Alternatively:</p> <pre>select \$fco from <#ri> where \$fco <info:fedora/fedora-system:def/model#hasModel> <info:fedora/1711.dl:CModelFirstClassObject> and \$fco <info:fedora/fedora-system:def/relations-external#isMemberOfCollection> <info:fedora/1711.dl:CollectionHLATextile></pre> <p>where the collection ID is "CollectionHLATextile".</p> <p>As a variation, the actor may just retrieve count of objects that match the criteria.</p>
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Use Case 3: Resource Index/Triplestore queries

Title (goal)	Obtain list of objects that contain a given datastream
Primary Actor	administrator, consuming applications
Scope	component
Level	
Story	<p>An administrator or piece of software needs to get a list of all the objects that contain a given datastream.</p> <p>They run the following iTQL query against the Resource Index to find all objects that contain a MASTER datastream:</p> <pre>select \$obj \$ds from <#ri> where \$obj <info:fedora/fedora-system:def/view#disseminates> \$ds and \$ds <info:fedora/fedora-system:def/view#disseminationType> <info:fedora/*/MASTER> in <#ri></pre>

Other Use Cases of Interest

1. [University of North Carolina at Chapel Hill](#)
2. [Yale University](#)
3. [Use Case: Distributed authentication and authorization](#)