SCIM Search Enhancements

March 15, 2013
IETF 86, Orlando
Goals

• This talk has two goals:

1) Share information about the progress between IETF#85 and IETF#86

2) Get feedback regarding the directions we are taking.
Background

• Since IETF#85, several tickets generated related to overall search functionality
  – 25, Query multiple resource types
  – 29, Search without filters in URLs
  – 31, Consistent Paged Results
• References to discussion input docs:
## Comparing Drafts

<table>
<thead>
<tr>
<th>Operation</th>
<th><code>draft-hunt-scim-xsearch-00</code></th>
<th><code>draft-hunt-scim-tokensearch-00</code></th>
</tr>
</thead>
<tbody>
<tr>
<td>Global Search</td>
<td>GET ...v2/.search?attributes=...&amp;filter=... POST ...v2/.search (params in HTTP Body in JSON on POST)</td>
<td>GET ...v2/.search?attributes=...&amp;filter=... POST ...v2/.search (params in HTTP Body in JSON on POST)</td>
</tr>
<tr>
<td>Search within Resource</td>
<td>GET ...v2/Users?attributes=... GET ...v2/Users/.search?attributes=... (params in HTTP Body in JSON on POST)</td>
<td>GET ...v2/Users?attributes=... GET ...v2/Users/.search?attributes=... (params in HTTP Body in JSON on POST)</td>
</tr>
<tr>
<td>Ask for a Stateful Result Set</td>
<td>add the parameter &quot;&amp;statefulResult=true&quot; to any of the above</td>
<td></td>
</tr>
<tr>
<td>Retrieve Stateful Resource Result Set</td>
<td>GET ...v2/.search/{search id}?startIndex=11 GET v2/Users/.search?searchId={token} &amp;startIndex=11</td>
<td></td>
</tr>
<tr>
<td>Retrieve using original request path</td>
<td>GET ...[original search path]/.search/{search id}?startIndex=11</td>
<td>GET [original search path]/.search?searchId={token}&amp;startIndex=11</td>
</tr>
<tr>
<td>Delete/Abandon Result Set</td>
<td>DELETE ...v2/.search/{search id} DELETE ...v2/.search?searchId={token}</td>
<td>DELETE ...v2/.search/{search id} DELETE ...v2/.search?searchId={token}</td>
</tr>
<tr>
<td>Abandon using original path</td>
<td>DELETE ...[original path]/.search/{search id} ? DELETE ...[original path]/.search?searchId={token}</td>
<td>DELETE ...[original path]/.search/{search id} ? DELETE ...[original path]/.search?searchId={token}</td>
</tr>
</tbody>
</table>
Current Proposal

• Significantly reduced proposal
• Multi-item search and POST Search text proposed for SCIM API Draft
• Consistent Paged Results – deferred
  – Will add as extension draft if requested
  – Unresolved discussion on key benefit/requirement
• Issue: Resource objects are just collections of attributes from one or more schemas
  – No way other than location to tell type (User)
  – No way to determine extended types (Student vs. Faculty)
GET /?attributes="displayName,username"
   &filter=displayName sw "smith"&count=10
Host: example.com
Accept: application/json
Authorization: Bearer h480djs93hd8
POST Search Example

POST /.search
Host: example.com
Accept: application/json
Content-Type: application/json
Authorization: Bearer h480djs93hd8
Content-Length: ...

{
  "schemas": ["urn:scim:schemas:core:1.0"],
  "attributes": ["displayName","username"],
  "filter": "displayName sw "smith\",
  "count": 10
}
POST Search Response

HTTP/1.1 200 OK
Content-Type: application/json
Location: https://example.com/.search

{  
  "totalResults":100,
  "itemsPerPage":10,
  "startIndex":1,
  "searchId":"131dc0667e20"
  "schemas": ["urn:scim:schemas:core:1.0"],
  "Resources": [
    {
      "meta": {
        "location": "https://example.com/Users/2819c223-7f76-413861904646",
        "resourceType": "User",
        "lastModified": ...
      }
      "username": "jsmith",
      "displayName": "Smith, James"
    },
    {
      "meta": {
        "location": "https://example.com/Groups/c8596b90-7539-4f20968d1908",
        "resourceType": "Group",
        "lastModified": ...
      }
      "displayName": "Smith Family"
    }, ...
  ]
}
Open Issues

• `resourceType` attribute – what values should it contain?
  – Base type (e.g. User or Group)
  – Extended types (e.g. Faculty, Student)
  – Current JSON schema cannot be used to determine
  – Alternate proposal to use schemas
    • `urn:scim:schemas:core:1.0::User`
    • `urn:scim:schemas:extension:enterprise:1.0::Employee`
Open Issues

- Token Search
- TotalResults Count
Questions to the Group

1. Is the multi-resource HTTP Get acceptable?
2. Is the HTTP POST Search acceptable?
3. Proceed with developing proposal for resourceType?
   - Complete as part of Core Schema review?
4. Mark #31 (consistent results) as won't fix