

SCIM Search Enhancements

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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:
 - <http://tools.ietf.org/html/draft-hunt-scim-xsearch-00.txt>
 - <http://tools.ietf.org/html/draft-hunt-scim-tokensearch-00.txt>

Comparing Drafts

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

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)

Root GET Search Example

```
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