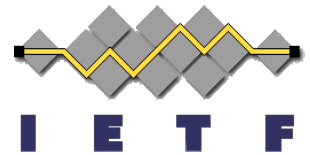


SCIM MV Filtering



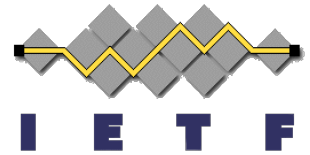
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IETF112 Online
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Introduction

- An extension to RFC7644 (SCIM Protocol) to enable filter values returned from complex multi-valued attributes
- Used to further reduce unnecessary data that might otherwise be returned
 - Return a few "members" of a very large group
 - Return rows based on a condition
- Spec was originally submitted 2019. However, SCIM WG was not active (draft-hunt-scim-mv-paging-00)

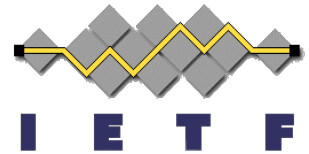
Extension definition

- Enhances the SCIM "attributes" parameter by appending "[]" and specifying:
 - A "valueFilter" from Fig 1 RFC7644 which appends "[]" to filter CMV attributes
 - Paging parameters specified by Sec 3.9 RFC7644 to limit returned values of a multi-valued attribute
- Response uses `meta.<attribute>.cnt` to indicate total number of values available
- Specifies feature discovery parameter in `/ServiceProviderConfig`



Example Request Filter

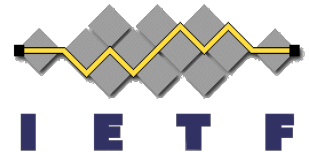
```
GET /Users/2819c223-7f76-453a-919d-413861904646? \
    attributes=*,emails[type eq work]
Host: example.com
Accept: application/scim+json
Authorization: Bearer h480djs93hd8
```



Example Response

```
HTTP/1.1 200 OK
Content-Type: application/scim+json
Location: https://example.com/v2/Users/2819c223-7f76-453a-919d-413861904646
ETag: W/"f250dd84f0671c3"
{
  "schemas":["urn:ietf:params:scim:schemas:core:2.0:User"],
  "id":"2819c223-7f76-453a-919d-413861904646",
  "externalId":"bjensen",
  "meta":{
    "resourceType":"User",
    "created":"2011-08-01T18:29:49.793Z",
    "lastModified":"2011-08-01T18:29:49.793Z",
    "location": "https://example.com/v2/Users/2819c223-7f76-453a-919d-413861904646",
    "version":"W\\\\"f250dd84f0671c3\\\"",
    "emails.cnt":1
  },
  "name":{"formatted":"Ms. Barbara J Jensen III", "familyName":"Jensen", "givenName":"Barbara" },
  "userName":"bjensen",
  "phoneNumbers":[ { "value":"555-555-8377", "type":"work" } ],
  "emails":[ { "value":"bjensen@example.com", "type":"work" } ]
}
```

attribute.<var>
gives info



Example MV Paging Request

```
GET /v2/Groups?filter=displayName sw 'Group' & \
  attributes=*,members[type eq \"Group\"&count=5&startIndex=1]
Host: example.com
Accept: application/scim+json
Authorization: Bearer h480djs93hd8
```

Discussion

- Interest?
- Privacy and Security Considerations:
 - Not yet done but,
 - Privacy and Security Considerations basically fall within the main RFC7644 considerations
 - Privacy enhanced by further limiting return of unnecessary data
 - Awaiting tentative agreement on extension mechanism