

SCIM Group Member Resource Extension

draft-zollner-scim-group-members

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The Problem

- Many directories have groups that are very large and introduce performance, scalability, and stability issues
- Group memberships in SCIM 2.0 are values of a multi-valued attribute (“members”) on the Group resource
- Pagination in SCIM only works for resources (Users, Groups), not for attribute values on a single resource
- Lack of pagination requires group members to be returned in a single HTTP response, causing issues (performance, stability) with large groups

Proposed Solution In This Draft

- Draft introduces:
 - /GroupMembers resource
 - “membersMetadata” attribute for Group resource
- Addresses inability to paginate group memberships
- Adds ability to add/remove group memberships via POST and DELETE

GroupMember Resource Representation

```
{
  "schemas": ["urn:ietf:params:scim:schemas:core:2.0:GroupMember"],
  "id": "gm12345",
  "group": {
    "value": "e9e30dba-f08f-4139-944c-2e6949b80b05",
    "$ref": "https://example.com/scim/v2/Groups/e9e3xxx"
  },
  "member": {
    "value": "2819c223-7f76-453a-919d-413861904646",
    "$ref": "https://example.com/scim/v2/Users/2819xxx",
    "type": "User"
  },
  "meta": {
    "resourceType": "GroupMember",
    "created": "2026-02-24T20:26:44Z",
    "lastModified": "2026-02-24T20:26:44Z",
    "location": "https://example.com/scim/v2/GroupMembers/gm12345"
  }
}
```

membersMetadata Extension for Group Resource

Schema Namespace

urn:ietf:params:scim:schemas:extension:groupMembers:2.0:Group

Attribute

```
membersMetadata": {  
  "policy": "external",  
  "ref": "https://example.com/scim/v2/GroupMembers?filter=group.value eq  
    \"e9e30dba-f08f-4139-944c-2e6949b80b05\",  
  "memberCount": 150321  
}
```

External: Members exposed solely through /GroupMembers

Inline: Members exposed only as Group “members” attribute

Hybrid: Members exposed through both “members” and /GroupMembers

membersMetadata Extension for Group Resource

```
{
  "schemas": ["urn:ietf:params:scim:schemas:core:2.0:Group"],
  "id": "e9e30dba-f08f-4139-944c-2e6949b80b05",
  "displayName": "All Employees",
  "urn:ietf:params:scim:schemas:extension:groupMembers:2.0:Group:membersMetadata": {
    "policy": "external",
    "ref": "https://example.com/scim/v2/GroupMembers?filter=group.value eq
      e9e30dba-f08f-4139-944c-2e6949b80b05",
    "memberCount": 150321
  },
  "meta": {
    "resourceType": "Group",
    "location": "https://example.com/scim/v2/Groups/e9e30dba-f08f-4139-944c-2e6949b80b05"
  }
}
```

Other Considered Options *(and why they weren't chosen)*

Pagination for all multi-valued attributes	<ul style="list-style-type: none">• More complicated• No pressing need - group memberships are the only current scale problem broadly observed
Pagination for the body of any SCIM resource	
HTTP-layer solutions (streaming, chunking..)	<ul style="list-style-type: none">• Implementation complexity• Higher compute/RAM consumption for SCIM Service Provider
Sub-resource model (/Groups/<id>/members)	<ul style="list-style-type: none">• Scalability and future-looking compatibility

Feedback?