

SCIM Cursor-based Pagination

IETF 120, July 2024

SCIM Cursor-based Pagination Updates

- Most SCIM WG/IETF Last Call review feedback addressed
- Working on establishing proof of interoperability
 - Let us know if you can help!
- Matt Peterson back as an author!

- At least one more version coming to tidy up language in draft

[draft-ietf-scim-cursor-pagination-05 - Cursor-based Pagination of SCIM Resources](#)

SCIM Delta Query

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SCIM Delta Query Updates

- New overhauled draft published recently (v01)
- Two methods of representing a changed resource
 - Traditional/Full SCIM resource representation
 - Only changed attributes
- Resource and attribute-level change descriptors
- Uses SCIM PATCH op semantics for attribute updates
(Add, Remove, Replace)

[draft-sehgal-scim-delta-query-01 - SCIM Delta Query \(ietf.org\)](#)

Endpoints and Protocol Message Format

New path extension endpoints

<resource>/deltaToken

<resource>/delta

Delta Query protocol messages

urn:ietf:params:scim:api:messages:2.0:delta:**token**

urn:ietf:params:scim:api:messages:2.0:delta:**request**

urn:ietf:params:scim:api:messages:2.0:delta:**response**

Request

- Builds on /.search

Example Request

```
POST /Users/.delta
Host: example.com
Accept: application/scim+json
Authorization: Bearer foo
```

```
{
  "schemas":["urn:ietf:params:scim:api:messages:2.0:delta:request"],
  "deltaToken":"3894e6d5-8e9e-4b5c-9b3b-6e8e7d4a4e9d",
  "filter":"title eq \"Tour Guide\" and addresses.country eq \"France\""
}
```

Response

- Returned in “delta response” message schema
- Returned inside of ListResponse’s “Resources” attribute
- Returns “full” SCIM resource representation via “data” attribute
- Returns changed attributes only via “operations” attribute

Responses - Create

```
{  
  "schemas": "urn:ietf:scim:api:messages:2.0:delta:response",  
  "changedResourceId": "123",  
  "resourceType": "User",  
  "changeType": "Create",  
  "data": {  
    "userName": "bjensen",  
    "id": "123",  
    "active": true,  
  }  
}
```


Responses - Update

```
{  
  "schemas": "urn:ietf:scim:api:messages:2.0:delta:response",  
  "changedResourceId": "456",  
  "resourceType": "User",  
  "changeType": "Update",  
  "operations": [  
    {  
      "op": "replace",  
      "path": "name.givenName",  
      "value": "Jim"  
    }  
  ]  
}
```

Responses - Delete

```
{  
  "schemas": "urn:ietf:scim:api:messages:2.0:delta:response",  
  "changedResourceId": "789",  
  "resourceType": "User",  
  "changeType": "Delete"  
}  
]  
}
```

Help Needed!

- Review the draft
- Provide feedback on SCIM WG mailing list