

Table of contents

List users

Article

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In this article

Namespace: microsoft.graph

Retrieve a list of user objects.

Note: This request might have replication delays for users that were recently created, updated, or deleted.

Permissions

One of the following permissions is required to call this API. To learn more, including how to choose permissions, see [Permissions](#).

Permission type	Permissions (from least to most privileged)
Delegated (work or school account)	User.ReadBasic.All, User.Read.All, User.ReadWrite.All, Directory.Read.All, Directory.ReadWrite.All
Delegated (personal Microsoft account)	Not supported.
Application	User.Read.All, User.ReadWrite.All, Directory.Read.All, Directory.ReadWrite.All

Guest users cannot call this API. For more information about the permissions for member and guest users, see [What are the default user permissions in Azure Active Directory?](#)

HTTP request

GET /users

Optional query parameters

This method supports the \$count , \$expand , \$filter , \$orderBy , \$search , \$select , and \$top OData query parameters to help customize the response. \$skip isn't supported. The default and maximum page sizes are 100 and 999 user objects respectively. Some queries are supported only when you use the ConsistencyLevel header set to eventual and \$count . For more information, see [Advanced query capabilities on Azure AD directory objects](#). The \$count and \$search parameters are currently not available in Azure AD B2C tenants.

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By default, only a limited set of properties are returned (businessPhones, displayName, givenName, id, jobTitle, mail, mobilePhone, officeLocation, preferredLanguage, surname, and userPrincipalName). To return an alternative property set, specify the desired set of user properties using the OData \$select query parameter. For example, to return displayName, givenName, and postalCode, add the following to your query \$select=displayName,givenName,postalCode .

Extension properties also support query parameters as follows:

Extension type Comments onPremisesExtensionAttributes 1-15 Returned only with \$select . Supports \$filter (eq , ne , and eq on null values). Schema extensions Returned only with \$select . Supports \$filter (eq , ne , and eq on null values). Open extensions Returned only with \$expand , that is, users?\$expand=extensions . Directory extensions Returned only with \$select . Supports \$filter (eq , ne , and eq on null values).

Certain properties cannot be returned within a user collection. The following properties are only supported when retrieving a single user: aboutMe, birthday, hireDate, interests, mySite, pastProjects, preferredName, responsibilities, schools, skills, mailboxSettings.

The following properties are not supported in personal Microsoft accounts and will be null : aboutMe, birthday, interests, mySite, pastProjects, preferredName, responsibilities, schools, skills, streetAddress.

Request headers

Header Value Authorization Bearer {token} (required) ConsistencyLevel eventual. This header and \$count are required when using \$search , or in specific usage of \$filter . For more information about the use of ConsistencyLevel and \$count , see Advanced query capabilities on Azure AD directory objects.

Request body

Do not supply a request body for this method.

Response

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If successful, this method returns a 200 OK response code and collection of user objects in the response body. If a large user collection is returned, you can use paging in your app.

Attempting to use \$select on the /users collection to retrieve properties that cannot be returned within a user collection (for example, the request ../users?\$select=aboutMe) returns a 501 Not Implemented error code.

Examples

Example 1: Get all users

Request

The following is an example of the request.

Response

The following is an example of the response.

Note: The response object shown here might be shortened for readability.

```
HTTP/1.1 200 OK Content-type: application/json { "@odata.context": "https://graph.microsoft.com/v1.0/$metadata#users",
"value": [ { "businessPhones": [], "displayName": "Conf Room Adams", "givenName": null, "jobTitle": null, "mail":
"Adams@contoso.com", "mobilePhone": null, "officeLocation": null, "preferredLanguage": null, "surname": null,
"userPrincipalName": "Adams@contoso.com", "id": "6ea91a8d-e32e-41a1-b7bd-d2d185eed0e0" }, { "businessPhones": [
"425-555-0100" ], "displayName": "MOD Administrator", "givenName": "MOD", "jobTitle": null, "mail": null,
"mobilePhone": "425-555-0101", "officeLocation": null, "preferredLanguage": "en-US", "surname": "Administrator",
"userPrincipalName": "admin@contoso.com", "id": "4562bcc8-c436-4f95-b7c0-4f8ce89dca5e" } ] }
```

Example 2: Get a user account using a sign-in name

Request

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The following is an example of the request.

Note: When filtering for an issuerAssignedId, you must supply both issuer and issuerAssignedId. However, the issuer value will be ignored in certain scenarios. For more details on filtering on identities see objectIdentity resource type

Response

The following is an example of the response.

Note: The response object shown here might be shortened for readability.

```
HTTP/1.1 200 OK Content-type: application/json { "value": [ { "displayName": "John Smith", "id":  
"87d349ed-44d7-43e1-9a83-5f2406dee5bd" } ] }
```

Example 3: Get only a count of users

Request

The following is an example of the request. This request requires the ConsistencyLevel header set to eventual because \$count is in the request. For more information about the use of ConsistencyLevel and \$count , see Advanced query capabilities on Azure AD directory objects.

Note: The \$count and \$search query parameters are currently not available in Azure AD B2C tenants.

```
GET https://graph.microsoft.com/v1.0/users/$count ConsistencyLevel: eventual
```

Response

The following is an example of the response.

HTTP/1.1 200 OK Content-type: text/plain 893

Example 4: Use \$filter and \$top to get one user with a display name that starts with 'a' including a count of returned objects

Request

The following is an example of the request. This request requires the ConsistencyLevel header set to eventual and the \$count=true query string because the request has both the \$orderBy and \$filter query parameters. For more information about the use of ConsistencyLevel and \$count , see Advanced query capabilities on Azure AD directory objects.

Note: The \$count and \$search query parameters are currently not available in Azure AD B2C tenants.

```
GET https://graph.microsoft.com/v1.0/users?$filter=startswith(displayName,'a')&$orderby=displayName&$count=true&$top=1
ConsistencyLevel: eventual
```

Response

The following is an example of the response.

Note: The response object shown here might be shortened for readability.

```
HTTP/1.1 200 OK Content-type: application/json { "@odata.context":"https://graph.microsoft.com/v1.0/$metadata#users",
"@odata.count":1, "value":[ { "displayName":"a", "mail":"a@contoso.com", "mailNickname":"a_contoso.com#EXT#",
"userPrincipalName":"a_contoso.com#EXT#@microsoft.onmicrosoft.com" } ] }
```

Example 5: Use \$filter to get all users with a mail that ends with 'a@contoso.com', including a count of returned objects, with the results ordered by userPrincipalName

Request

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The following is an example of the request. This request requires the ConsistencyLevel header set to eventual and the \$count=true query string because the request has both the \$orderBy and \$filter query parameters, and also uses the endsWith operator. For more information about the use of ConsistencyLevel and \$count , see Advanced query capabilities on Azure AD directory objects.

Note: The \$count and \$search query parameters are currently not available in Azure AD B2C tenants.

Response

The following is an example of the response.

Note: The response object shown here might be shortened for readability.

```
HTTP/1.1 200 OK Content-type: application/json { "@odata.context": "https://graph.microsoft.com/v1.0/$metadata#users",
"@odata.count": 1, "value": [ { "displayName": "Grady Archie", "givenName": "Grady", "jobTitle": "Designer", "mail":
"GradyA@contoso.com", "userPrincipalName": "GradyA@contoso.com", "id": "e8b753b5-4117-464e-9a08-713e1ff266b3" } ] }
```

Example 6: Use \$search to get users with display names that contain the letters 'wa' including a count of returned objects

Request

The following is an example of the request. This request requires the ConsistencyLevel header set to eventual because \$search is in the request. For more information about the use of ConsistencyLevel and \$count , see Advanced query capabilities on Azure AD directory objects.

Note: The \$count and \$search query parameters are currently not available in Azure AD B2C tenants.

Response

The following is an example of the response.

Note: The response object shown here might be shortened for readability.

```
HTTP/1.1 200 OK Content-type: application/json { "@odata.context":"https://graph.microsoft.com/v1.0/$metadata#users",
"@odata.count":7, "value":[ { "displayName":"Oscar Ward", "givenName":"Oscar", "mail":"oscarward@contoso.com",
"userPrincipalName":"oscarward@contoso.com" } ] }
```

Example 7: Use \$search to get users with display names that contain the letters 'wa' or the letters 'ad' including a count of returned objects

Request

The following is an example of the request. This request requires the ConsistencyLevel header set to eventual because \$search is in the request. For more information about the use of ConsistencyLevel and \$count , see Advanced query capabilities on Azure AD directory objects.

Note: The \$count and \$search query parameters are currently not available in Azure AD B2C tenants.

Response

The following is an example of the response.

Note: The response object shown here might be shortened for readability.

```
HTTP/1.1 200 OK Content-type: application/json { "@odata.context":"https://graph.microsoft.com/v1.0/$metadata#users",
"@odata.count":7, "value":[ { "displayName":"Oscar Ward", "givenName":"Oscar", "mail":"oscarward@contoso.com",
"userPrincipalName":"oscarward@contoso.com" }, { "displayName":"contosoAdmin1", "givenName":"Contoso Administrator",
"mail":"'contosoadmin1@fabrikam.com", "userPrincipalName":"contosoadmin1_fabrikam.com#EXT#@microsoft.onmicrosoft.com"
} ] }
```

Example 8: Use \$filter to get users who are assigned a specific license

Request

The following is an example of the request.

```
GET https://graph.microsoft.com/v1.0/users?$select=id,mail,assignedLicenses&$filter=assignedLicenses/any(u:u/skuId eq cbdcl4ab-d96c-4c30-b9f4-6ada7cdc1d46)
```

Response

The following is an example of the response.

```
HTTP/1.1 200 OK Content-type: application/json { "@odata.context":  
"https://graph.microsoft.com/v1.0/$metadata#users(id,mail,assignedLicenses)", "value": [ { "id":  
"cb4954e8-467f-4a6d-a8c8-28b9034fadbc", "mail": "admin@contoso.com", "assignedLicenses": [ { "disabledPlans": [],  
"skuId": "cbdc14ab-d96c-4c30-b9f4-6ada7cdc1d46" } ] }, { "id": "81a133c2-bdf2-4e67-8755-7264366b04ee", "mail":  
"DebraB@contoso.com", "assignedLicenses": [ { "disabledPlans": [], "skuId": "cbdc14ab-d96c-4c30-b9f4-6ada7cdc1d46" } ]  
} ] }
```

Example 9: Get the value of a schema extension for all users

In this example, the ID of the schema extension is ext55gb1109_msLearnCourses .

Request

Response

In the following response, the schema extension property ext55gb1109_msLearnCourses is unassigned in two of the user objects.

```
HTTP/1.1 200 OK Content-type: application/json { "@odata.context":  
"https://graph.microsoft.com/v1.0/$metadata#users(ext55gb1109_msLearnCourses)", "value": [ {}, {
```

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```
"ext55gb1109_msLearnCourses": { "@odata.type": "#microsoft.graph.ComplexExtensionValue", "courseType": "Developer",  
"courseName": "Introduction to Microsoft Graph", "courseId": 1 } }, { } ] }
```

Reference

[Big Data-Enabled Nursing: Education, Research and Practice \(Health Informatics\)](#)
[Strategies and Tactics of Behavioral Research and Practice](#)