



Access Keystone from Digital Advisor REST API

Keystone

NetApp
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Access Keystone from Digital Advisor REST API

Get started using the Digital Advisor REST API to retrieve Keystone data

Digital Advisor REST API provides a programmatic interface for retrieving Keystone subscription and consumption details.

At a high level, the workflow to interact with Digital Advisor REST API involves the following steps:

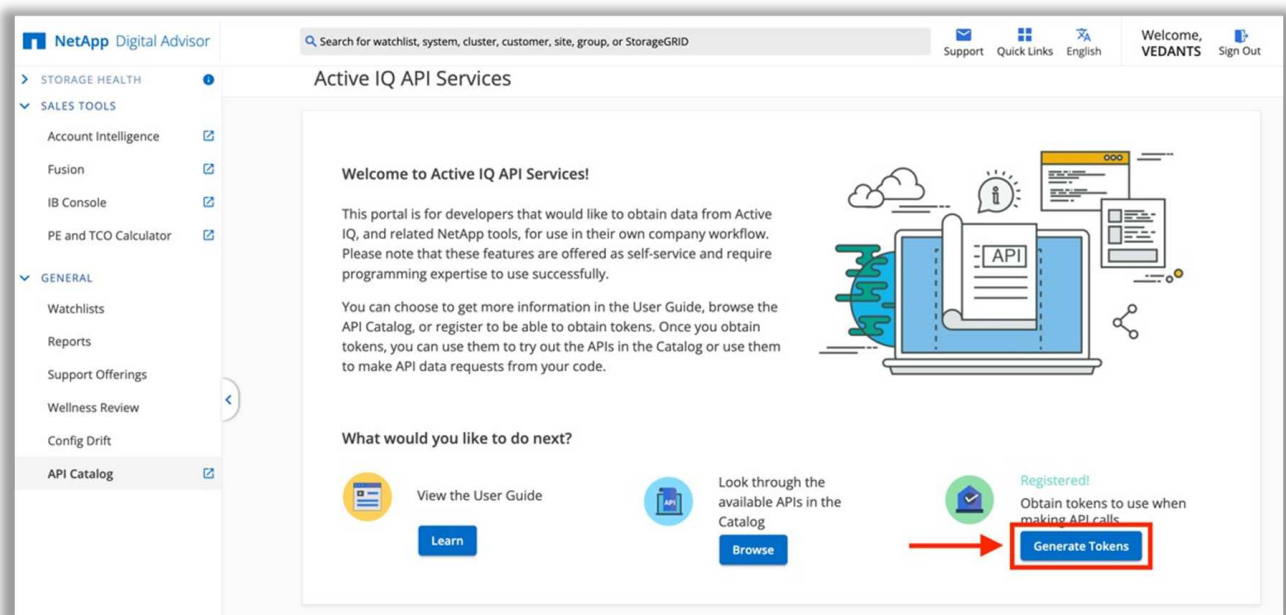
1. Set up your Digital Advisor account. You must have valid NetApp Support site credentials to log in to Digital Advisor. To learn more, refer to [Log in to Digital Advisor](#).
2. Understand the two-step authentication process.
 - a. **Generate a refresh token:** A refresh token is obtained through Digital Advisor console using NetApp credentials. This token is used to ensure continuous access without the need for repeated logins.
 - b. **Generate an access token:** The refresh token is used to generate access tokens. An access token is required to authorize API calls to the Keystone service and is valid for one hour.
3. Execute an API call to retrieve the desired data. You can programmatically retrieve lists of customers, customer subscription data, and customer consumption details.

Generate refresh and access tokens

A refresh token is used to programmatically obtain a new set of access tokens and is good for one week or until it has been used to obtain a new set of tokens.

Steps to generate a refresh token using the Digital Advisor portal are as follows:

1. Log in to the [Digital Advisor portal](#) using NetApp credentials and select **Generate Tokens**.



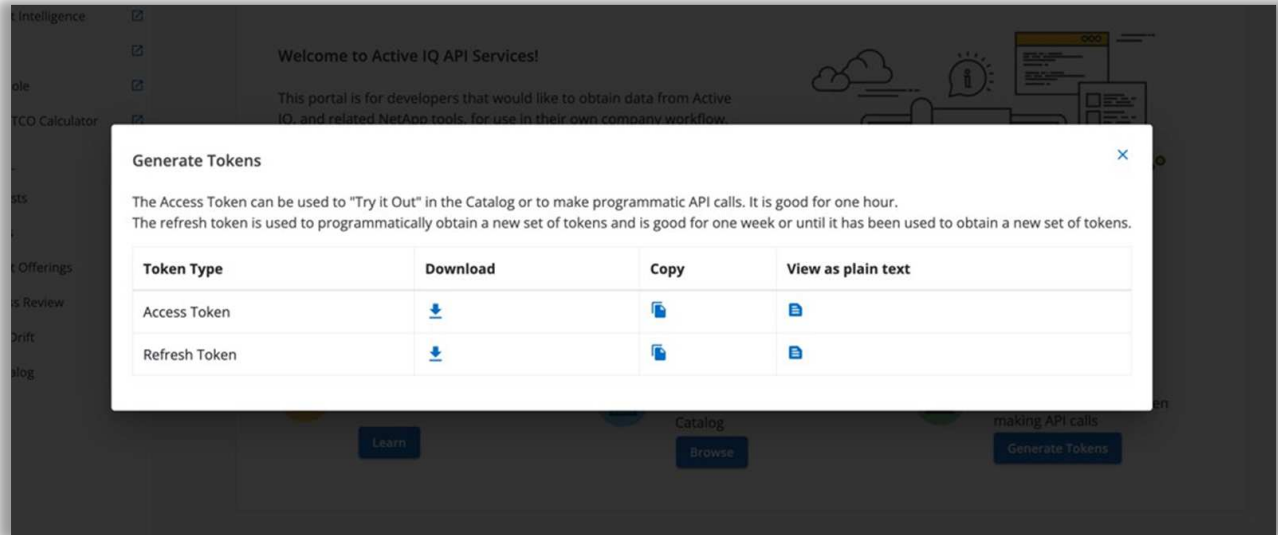


For first-time users, if **Generate Tokens** option is not available, select **Register** to submit an authorization request. Fill out the registration form to enable the functionality.

2. The system generates an access token and a refresh token. Save the refresh token on a trusted platform.



The portal gives you multiple ways to save one or both tokens in the set. You can copy them to clipboard, download them as a text file, or view them as plain text.



Generate access token using the Digital Advisor REST API

The access token is used to authenticate Digital Advisor API requests. It can be generated directly through the console along with the refresh token or using the following API call:

Request:

Method	POST
Endpoint	https://api.activeiq.netapp.com/v1/tokens/accessToken
Headers	<ul style="list-style-type: none"> • accept: application/json • Content-Type: application/json
Request Body	<pre>{ "refresh_token": "<refresh-token>" }</pre>



You need to have administrative privileges for Digital Advisor to access this endpoint.

Response:

API returns an access token and a refresh token in a JSON format as response.

```
{
  "refresh_token": "string",
  "access_token": "string"
}
```

Status code: 200 – Successful request

Curl example:

```
curl -X 'POST' \ 'https://api.activeiq.netapp.com/v1/tokens/accessToken' \
-H 'accept: application/json' \ -H 'Content-Type: application/json' \ -d '
{ "refresh_token": "<refresh-token>" }'
```

Execute the API call

Upon successful generation of an access token, authorized Digital Advisor API calls can be executed for the required information.

Get a list of all customers using the Digital Advisor REST API

This API retrieves a list of all the customerIDs associated with the user.

Request:

Method	GET
Endpoint	https://api.activeiq.netapp.com/v1/keystone/customers
Headers	<ul style="list-style-type: none">• accept: application/json• authorizationToken: <access_key>

Response:

The API will respond with a JSON object containing a list of customer names and respective IDs. Here's an example response:

```

{
  "results": {
    "returned_records": 0,
    "records": [
      {
        "Customers": [
          {
            "customer_id": "string",
            "customer_name": "string"
          }
        ]
      }
    ],
    "request_id": "string",
    "response_time": "string"
  }
}

```

Status code: 200 – Successful request

Curl example:

```

curl -X 'GET' \ 'https://api.activeiq.netapp.com/v1/keystone/customers' \
-H 'accept: application/json' -H 'authorizationToken: <access-key>'

```

Get customer subscriptions using the Digital Advisor REST API

This API retrieves a list of all the subscriptions and service levels associated with the given customerID.

Request:

Method	GET
Endpoint	https://api.activeiq.netapp.com/v1/keystone/customer/subscriptions-info
Parameters	<ul style="list-style-type: none"> • type: "customer" • id: <customer-id>
Headers	<ul style="list-style-type: none"> • accept: application/json • authorizationToken: <access_key>

Response:

The API will respond with a JSON object containing a list of all the subscriptions and associated service level details for the given customer. Here's an example response:

```
[
  {
    "results": {
      "returned_records": 0,
      "records": [
        {
          "subscription": {
            "account_name": "string",
            "number": "string",
            "start_date": "2024-05-28T15:47:49.254Z",
            "end_date": "2024-05-28T15:47:49.255Z"
          },
          "service_levels": [
            {
              "name": "string",
              "committed_tib": 0
            }
          ]
        },
        {
          "request_id": "string",
          "response_time": "string"
        }
      ]
    }
  }
]
```

Status code: 200 – Successful request

Curl example:

```
curl -X 'GET' \
'https://api.activeiq.netapp.com/v1/keystone/customer/subscriptions-
info?type=customer&id=<customerID>' \ -H 'accept: application/json' \ -H
'authorizationToken: <access-key>'
```

Get customer consumption details using the Digital Advisor REST API

This API retrieves the current consumption details for all the subscriptions associated with the given customerID.

Request:

Method	GET
EndPoint	https://api.activeiq.netapp.com/v1/keystone/customer/consumption-details
Parameters	<ul style="list-style-type: none"> • type: "customer" • id: <customer-id>
Headers	<ul style="list-style-type: none"> • accept: application/json • authorizationToken: <access_key>

Response:

The API will respond with a JSON object containing a list of all the subscriptions with the current service usage metrics for the given customer. Here's an example response:

```

{
  "result": {
    "returned_records": "string",
    "records": [
      {
        "subscription": {
          "account_name": "string",
          "number": "string",
          "start_date": "string",
          "end_date": "string"
        },
        "service_levels": [
          {
            "name": "string",
            "committed_tib": "string",
            "consumed_tib": "string",
            "consumed_timestamp_utc": "string",
            "burst_tib": "string",
            "accrued_burst_tib": "string"
          }
        ]
      },
      {
        "request_id": "string",
        "response_time": "string"
      }
    ]
  }
}

```

Status code: 200 – Successful request

Curl example:


```
curl -X 'GET' \
'https://api.activeiq.netapp.com/v1/keystone/customer/consumption-
details?type=customer&id=<customerID>' \ -H 'accept: application/json' \
-H 'authorizationToken: <access-key>'
```

Get the historical consumption details for a customer

This API retrieves the historical consumption details for all the subscriptions associated with the given customerID as per the time range specified.

Request:

Method	GET
EndPoint	https://api.activeiq.netapp.com/v1/keystone/customer/historical-consumption-details
Parameters	<ul style="list-style-type: none">• type: "customer"• id: <customer-id>• from_date_utc: <start date(in RFC3339 format)>• to_date_utc: <end date(in RFC3339 format)>
Headers	<ul style="list-style-type: none">• accept: application/json• authorizationToken: <access_key>

Response:

The API will respond with a JSON object containing a list of all the subscriptions with the historical service usage metrics for the given customer in the selected time range. Here's an example response:

```
{
  "results": {
    "returned_records": 0,
    "records": [
      {
        "subscription": {
          "account_name": "string",
          "number": "string",
          "start_date": "2023-08-24T14:15:22Z",
          "end_date": "2023-08-24T14:15:22Z"
        },
        "service_levels": [
          {
            "name": "string",
            "historical_consumption": [
              {
                "committed_tib": 0,
                "consumed_tib": 0,
                "timestamp_utc": "2023-08-24T14:15:22Z",
                "burst_tib": 0,
                "accrued_burst_tib": 0,
                "is_invoiced": true
              }
            ]
          }
        ]
      },
      {
        "request_parameters": {
          "from_date_utc": "2023-08-24",
          "to_date_utc": "2023-08-24",
          "customer_id": "string"
        },
        "request_id": "string",
        "response_time": "string",
        "customer": {
          "name": "string",
          "id": "string"
        }
      }
    ]
  }
}
```

Status code: 200 – Successful request

Curl example:

```
curl -X 'GET' \ 'https://api.activeiq-  
stg.netapp.com/v1/keystone/customer/historical-consumption-details?  
type=customer&id=<customerID>&from_date_utc=2023-08-24T14%3A15%3A22Z&t  
_date_utc=2023-08-24T14%3A15%3A22Z' \ -H 'accept: application/json' \ -H  
'authorizationToken: <access-key>'
```

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