OneStream™

REST API Implementation Guide

8.0.0 Release

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Table of Contents

Introduction

This guide provides information about the implementation, authentication, and application programming interfaces available to extend OneStream functionality.

OneStream Web API is a RESTful web service designed to expose OneStream Data Automation functions when interacting with third-party API client applications.

For customers in a self-hosted environment, Web API must be installed on a web server and configured for external authentication providers supporting OAuth2.0/OpenID Connect authorization protocol. Identity providers currently supported are Azure AD, Okta, and PingFederate.

All customers in a OneStream-hosted environment using authentication with OneStream IdentityServer, including those using native authentication and any OIDC or SAML 2.0 compliant external identity providers, can use personal access tokens (PATs) to access OneStream REST API. See the *Identity and Access Management Guide* for information about authentication with OneStream IdentityServer and using PATs.

OneStream Web API is API client agnostic. It accepts and outputs data in JSON format making it possible for every API client application that supports this format to also interact with the service.

REST API Overview

In this topic:

- OneStream Web API Endpoints
- OneStream REST API Implementation
- Configure OneStream API for External Authentication

OneStream Web API Endpoints

URLs are relative to query parameter api-version=5.2.0, unless otherwise noted.

Authentication

Authentication endpoint. Represents a RESTful service for Authentication.

- POST api/Authentication/LogonAndReturnCookie

  Used primarily to verify Web API installation completed successfully. Returns an authentication message or a message indicating failure along with a proper HTTP code.

DataManagement

DataManagement endpoint. Represents a RESTful service of Data Management.

- POST api/DataManagement/ExecuteSequence:

  Executes a Data Management Sequence and returns a success/failure message along with a proper HTTP code.

- POST api/DataManagement/ExecuteStep

  Executes a Data management Step and returns a success/failure message along with a proper HTTP code.

DataProvider

DataProvider endpoint represents a RESTful service of Data Provider.

- POST api/DataProvider/GetAdoDataSetForAdapter:

  Executes a Data Provider HTTP Post request and returns a JSON representation of a DataSet for a given Dashboard Adapter.

- POST api/DataProvider/GetAdoDataSetForCubeViewCommand

  Executes a Data Provider HTTP Post request and returns a JSON representation of a DataSet for a given Cube View.

- POST api/DataProvider/GetAdoDataSetForSqlCommand

  Executes a Data Provider HTTP Post request and returns a JSON representation of a DataSet for a given Sql query. **Administrator role is required for this functionality.**

- POST api/DataProvider/GetAdoDataSetForMethodCommand

  Executes a Data Provider HTTP Post request and returns a JSON representation of a DataSet for a given pre-defined list of method commands. **Administrator role is required for this functionality.**

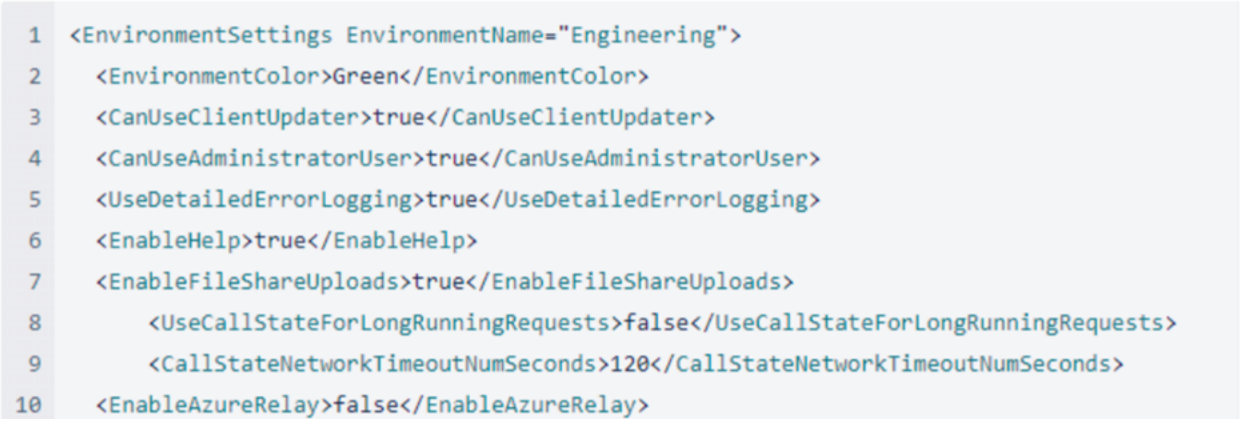
Call State For Long Running Requests

To prevent proxy appliance time-out, a polling method was introduced for long running requests. When this is enabled, all requests use the polling method based on the configured setting in the XFAppServerConfig.xml indicating how long the request has to complete. This allows long running requests to complete without the proxy appliances returning a 502 Bad Gateway as a response to the request inactivity that causes the proxy to terminate the connection.

How It Works

XFCallState polling must first be enabled in the XFAppServerConfig.xml in the EnvironmentSettings block.

File: XFAppServerConfig.xml



```
<EnvironmentSettings EnvironmentName="Engineering">
  <EnvironmentColor>Green</EnvironmentColor>
  <CanUseClientUpdater>true</CanUseClientUpdater>
  <CanUseAdministratorUser>true</CanUseAdministratorUser>
  <UseDetailedErrorLogging>true</UseDetailedErrorLogging>
  <EnableHelp>true</EnableHelp>
  <EnableFileShareUploads>true</EnableFileShareUploads>
      <UseCallStateForLongRunningRequests>false</UseCallStateForLongRunningRequests>
      <CallStateNetworkTimeoutNumSeconds>120</CallStateNetworkTimeoutNumSeconds>
  <EnableAzureRelay>false</EnableAzureRelay>
```

The configured values of UseCallStateForLongRunningRequests and CallStateNetworkTimeoutNumSeconds manage the XFCallState functionality. When UseCallStateForLongRunningRequests is set to true, call state polling is used. The configured value for CallStateNetworkTimeoutNumSeconds determines the time to wait before using call state to complete the request, default 120 seconds.

Authentication

To secure REST API with OAuth 2.0 for customers in a self-hosted environment, configure authentication with one of these supported external providers:

- Azure AD Configuration
- Okta Configuration
- PingFederate Configuration

For customers in a OneStream-hosted environment, see the *Identity and Access Management Guide* for information about authentication with OneStream IdentityServer and using personal access tokens (PATs).

Access tokens from the any of the above providers have short expiration times. To avoid copying the entire token value to the Authorization/Token text box, create a variable that holds the value. For every call to the external provider, the value of the access token returned will be copied to the variable.

- Create a global variable in Postman, name it appropriately, for instance webapi_access_token.

- In the Tests tab of the POST request to the external provider copy the script below:

```
var data = pm.response.json();
pm.environment.set("webapi_access_token", data.access_token);
```

Authentication API

Method	Endpoint	Description
Post	Authentication/Logon	Logs on and returns a SessionInfo (SI) object for use with other Rest API calls that accept an SI as an argument. This endpoint performs a logon only and does not open an application. This is the equivalent of entering login credentials in the Desktop App before selecting and opening an application.

Authentication/Logon

POST https://{BaseWebServer}/api/Authentication/Logon?api-version=7.2.0

Query Parameters

Key	Value	Required
api-version	7.2.0	Yes

Authorization

Type	Value	Required
Bearer Token	(your access token)	Yes

Headers

Key	Value	Required
Content-Type	application/json	Yes

Request Body

Key	Type	Description	Required
BaseWebServerURL	string	Your URL for the web service	Yes

Sample Request

```
{
  "BaseWebServerUrl": "https:// golfstream.onestreamcloud.com/OneStreamWeb"
}
```

Sample Response

```
{
    "Message": "Logon succeeded.",
    "Logon SessionInfo": {
        "XfBytes": " QB8AACNodHRwOi8vbG9jYWxob3N0OjUwMDAxL09uZVN0cm
        VhbVdlYhQAAAB7izp1jCP3BUVr8bjD2f6KmmL5BKzhOVWUzU1MikEYOVekO
        ZUIT0tUQV9NMk27tnn6+VZaR544CKlYPCFeWSBWCTmQ2ggAAAAAAAAAAAAA
        AAAAAAAAAAAAAAAFZW4tVVMAAAAAAAAAAAAAAAAAAAAAAAAAAP/////////
        /////////////////8P//////////////AwAAABn8//8Z/P//Gfz//xn8//
        8Z/P//Gfz//xn8//8Z/P//Gfz//xn8//8Z/P//Gfz//w==""
    },
    "Authorized applications": [
        "GolfStreamDemo_2022",
        "OFC_ECA_ProductMgmt",
        "OneStream_GolfStream"
    ]
}
```

Application API

Method	Endpoint	Description
Post	Application/OpenApplication	Opens specified application. Requires a valid sessionInfo token obtained from the Authentication/Logon method.

Application/OpenApplication

POST https://{BaseWebServer}/api/Application/OpenApplication?api-version=7.2.0

Query Parameters

Key	Value	Required

api-version	7.2.0	Yes

Authorization

Type	Value	Required
Bearer Token	(your access token)	Yes

Headers

Key	Value	Required
Content-Type	application/json	Yes

Request Body

Key	Type	Description	Required
ApplicationName	string	Name of the application to open	Yes
SI	array (bytes)	The SessionInfo (SI) object obtained from Authentication/Logon endpoint.	Yes

Sample Request

```
{
  "ApplicationName": "GolfStreamDemo_2022",
  "SI": {
    "XfBytes": "QB8AACNodHRwOi8vbG9jYWxob3N0OjUwMDAxL09uZVN0cmVhb
    VdlYhQAAAB7izp1jCP3BUVr8bjD2f6KmmL5BKzhOVWUzU1MikEYOVekOZUIT0
    tUQV9NMk27tnn6+VZaR544CKlYPCFeWSBWCTmQ2ggAAAAAAAAAAAAAAAAAAAA
    AAAAAAAAFZW4tVVMAAAAAAAAAAAAAAAAAAAAAAAAAAP//////////////////
    ////////8P//////////////AwAAABn8//8Z/P//Gfz//xn8//8Z/P//Gfz//
    xn8//8Z/P//Gfz//xn8//8Z/P//Gfz//w=="
  }
}
```

Sample Response

```
{
    "Message": "Open application succeeded.",
    "Application SessionInfo": {
        "XfBytes": "QB8AACNodHRwOi8vbG9jYWxob3N0OjUwMDAxL09uZVN0
        cmVhbVdlYhQAAAAep0GewgsakcN4GJDmuwyaaIMazfN/aHyhnXNLgg+h
        Uxy6cpQIT0tUQV9NMk27tnn6+VZaR544CKlYPCFe0BusL1iM2ggUAAAA
        rL9Q04ePExHJxVU89Y1MAeNxrh8UT25lU3RyZWFtX0dvbGZTdHJlYW3x
        ShfEXWxvRbOx2hWDSCd0BWVuLVVTAAAAAAAAAAAAAAAAAAAAAAAAAAD/
        /////////wAAAAACAFABAABQAfD///8AAAAAYHzddwMAAABCAfAAGfz/
        /5z///+c////FQAQACYAIAARAGAAAwCQABn8//8Z/P//Gfz//xn8//8="
    }
}
```

Data Provider API v7.2.0

Method	Endpoint	Description
Post	DataProvider/ GetadoDataSetForAdapter	Executes a Data Provider HTTP Post request and and returns a JSON representation of a DataSet for a given Dashboard Adapter. Requires a SessionInfo (SI) object obtained from Application/OpenApplication endpoint.

DataProvider/GetAdoDataSetForAdapter

POST https://{BaseWebServer}/api/DataProvider/GetAdoDataSetForAdapter?api-version=7.2.0

Query Parameters

Key	Value	Required
api-version	7.2.0	Yes

Authorization

Type	Value	Required
Bearer Token	(your access token)	Yes

Headers

Key	Value	Required
Content-Type	application/json	Yes

Request Body

Key	Type	Description	Required
IsSystemLevel	boolean	An indication of whether the Dashboard Adapter is defined at the System Level (True) or for the specified Application (False).	Yes
AdapterName	string	The name of the Dashboard Adapter used for data retrieval.	Yes
ResultDataTableName	string	Name of the resulting table in the DataSet	Yes
CustomSubstVarsAsCommaSeparatedPairs	string	Comma separated list of Variable name/value pairs requiring a user prompt. These must be specified using the following format: "VariableName1=[VariableValue1],VariableName2=[VariableValue2],...".	No
SI	array (bytes)	The SessionInfo (SI) object obtained from Application/OpenApplication endpoint.	Yes

Sample Request

```
{
  "IsSystemLevel": true,
  "AdapterName": "Sales Mix (WF)",
  "ResultDataTableName": "ResultsTable",
  "CustomSubstVarsAsCommaSeparatedPairs": "",
  "SI": {
    "XfBytes": " QB8AACNodHRwOi8vbG9jYWxob3N0OjUwMDAxL09uZVN0cm
    VhbVdlYhQAAAAep0GewgsakcN4GJDmuwyaaIMazfN/aHyhnXNLgg+hUxy6c
    pQIT0tUQV9NMk27tnn6+VZaR544CKlYPCFe0BusL1iM2ggUAAAArL9Q04eP
    ExHJxVU89Y1MAeNxrh8UT25lU3RyZWFtX0dvbGZTdHJlYW3xShfEXWxvRbO
    x2hWDSCd0BWVuLVVTAAAAAAAAAAAAAAAAAAAAAAAAAAD//////////wAAAA
    ACAFABAABQAfD///8AAAAAYHzddwMAAABCAfAAGfz//5z///+c////FQAQA
    CYAIAARAGAAAwCQABn8//8Z/P//Gfz//xn8//8="
  }
}
```

Sample Response

```
{
    "ResultsTable": [
        {
            "RowId": 0,
            "RowName": "Row1",
            "PovCubeNameAndDesc": "GolfStream - Corporate",
            "Pov00EntityNameAndDesc": "Total GolfStream",
            "Pov02ScenarioNameAndDesc": "Actual - Actual",
            "Pov03TimeNameAndDesc": "2011M2 - Feb 2011",
            "Pov04ViewNameAndDesc": "YTD",
            "RowHdr0NameAndDesc": "Drivers",
            "RowHdr0Indent": 0,
            "Col0Hdr0NameAndDesc": "60000 - Operating Sales",
            "Col0Hdr0Indent": 0,
            "Col0Value": 25552270.482000000000000000,
            "Col0ValueAsText": "25,552,270.48"
        },
        }
        "RowId": 1,
            "RowName": "Row1",
            "PovCubeNameAndDesc": "GolfStream - Corporate",
            "Pov00EntityNameAndDesc": "Total GolfStream",
            "Pov02ScenarioNameAndDesc": "Actual - Actual",
            "Pov03TimeNameAndDesc": "2011M2 - Feb 2011",
            "Pov04ViewNameAndDesc": "YTD",
            "RowHdr0NameAndDesc": "Fairway Woods",
            "RowHdr0Indent": 0,
            "Col0Hdr0NameAndDesc": "60000 - Operating Sales",
            "Col0Hdr0Indent": 0,
            "Col0Value": 17476089.966000000000000000,
            "Col0ValueAsText": "17,476,089.97"
        }
    ]
}
```

OneStream REST API Implementation

In this topic:

- Authentication
- OneStream WebAPI Endpoints

OneStream WebAPI Endpoints

This API implementation is client agnostic therefore every API test capable third-party tool can be pointed to OneStreamWeb API endpoints. This tutorial is using Postman. Note that all arguments in the body are **required** unless otherwise specified.

Versioning This implementation will start with Api-version=5.2.0

Data Management Execute Sequence endpoint

1. Create new POST request in Postman,
2. Url= http(s)://[servername]:[port]/onestreamapi/api/DataManagement/ExecuteSequence?api-version=5.2.0
3. Authorization: Type=Bearer Token. Token={{webapi_access_token}}
4. Headers: Content-Type=application/json
5. Body (raw / jSON):

```
{
  "BaseWebServerUrl": [your web server url ],
  "ApplicationName":[your application name],
  "SequenceName": [existing sequence name],
  "CustomSubstVarsAsCommaSeparatedPairs": [comma separated list of key value
pairs as substitution variables with the following format: "VariableName1=
[VariableValue1],VariableName2=[VariableValue2],..."] - Optional
}
```

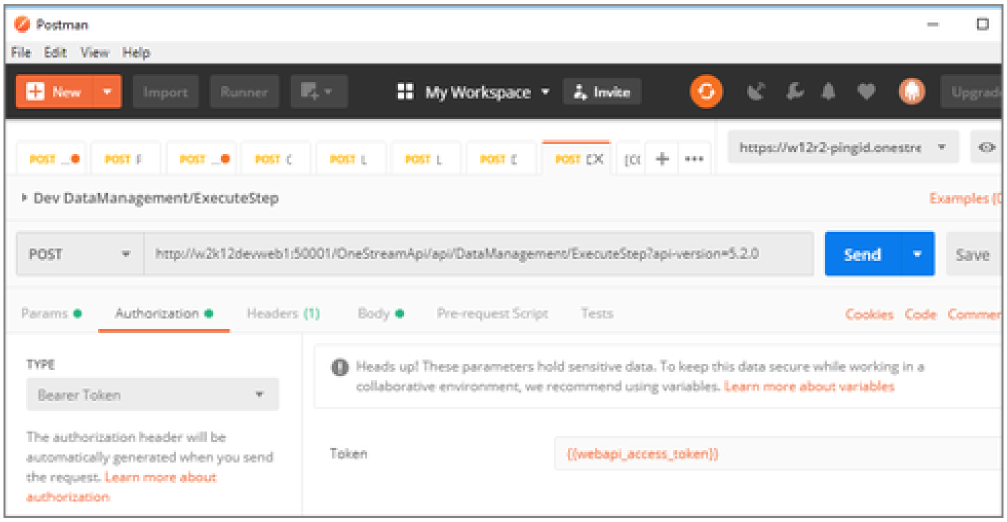
6. Click Send and observe the response at the bottom pane. If successful, a message of "Data Management Sequence [sequence name] was completed" will be returned otherwise a descriptive error message will show. More details will be logged in the Error and Activity logs.

Data Management Execute Step endpoint

1. Create new POST request in Postman,
2. Url= http(s)://[servername]:[port]/onestreamapi/api/DataManagement/ExecuteStep?api-version=5.2.0
3. Authorization: Type=Bearer Token. Token={{webapi_access_token}}
4. Headers: Content-Type=application/json
5. Body (raw / jSON):

```
{
     "BaseWebServerUrl": [your web server url ],
     "ApplicationName":[your application name],
     "DataManagementGroupName": [an existing data management group name],
     "StepName": [existing step name],
     "CustomSubstVarsAsCommaSeparatedPairs": [comma separated list of key value pairs as
substitution variables with the following format: "VariableName1=[VariableValue1],VariableName2=
[VariableValue2],..."] - Optional
 }
```

6. Click Send and observe the response at the bottom pane. If successful, a message of "Data Management Step [step name] was completed" will be returned otherwise a descriptive error message will show. More details will be logged in the Error and Activity logs.



Dev DataManagement/ExecuteStep

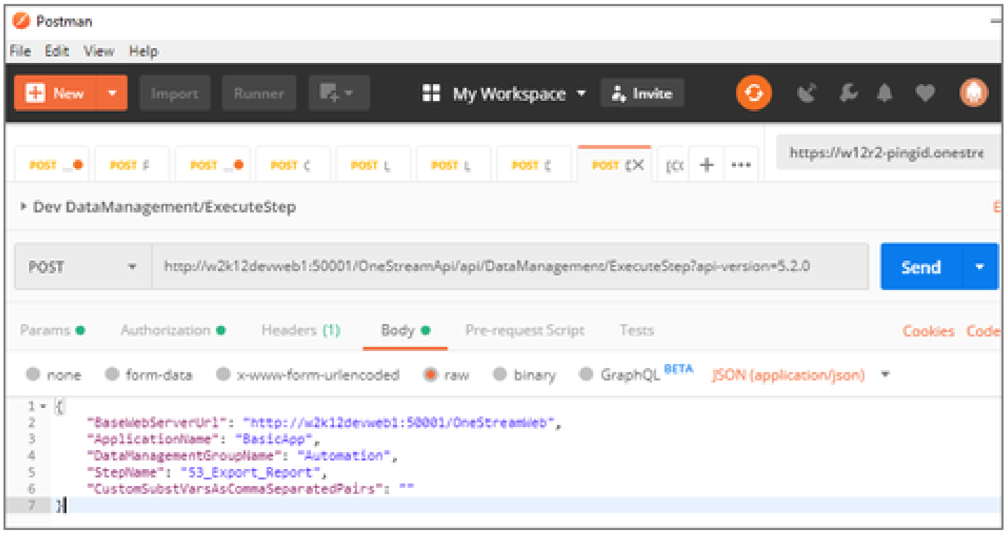
POST http://w2k12devweb1:50001/OneStreamApi/api/DataManagement/ExecuteStep?api-version=5.2.0

TYPE: Bearer Token

The authorization header will be automatically generated when you send the request. Learn more about authorization

Heads up! These parameters hold sensitive data. To keep this data secure while working in a collaborative environment, we recommend using variables. Learn more about variables

Token: {{webapi_access_token}}



Dev DataManagement/ExecuteStep

POST http://w2k12devweb1:50001/OneStreamApi/api/DataManagement/ExecuteStep?api-version=5.2.0

○ none ○ form-data ○ x-www-form-urlencoded ● raw ○ binary ○ GraphQL BETA JSON (application/json)

```
{
    "BaseWebServerUrl": "http://w2k12devweb1:50001/OneStreamWeb",
    "ApplicationName": "BasicApp",
    "DataManagementGroupName": "Automation",
    "StepName": "53_Export_Report",
    "CustomSubstVarsAsCommaSeparatedPairs": ""
}
```

Data Provider GetAdoDataSetForAdapter endpoint

1. Create new POST request in Postman,
2. Url= http(s)://[servername]:[port]/onestreamapi/api/DataProvider/GetAdoDataSetForAdapter?api-version=5.2.0
3. Authorization: Type=Bearer Token. Token={{webapi_access_token}}

4. Headers: Content-Type=application/json

5. Body (raw / jSON):

```
{
     "BaseWebServerUrl": [your web server url ],
     "ApplicationName":[your application name],
     "WorkspaceName": Reserved for future use. Use an empty string. - Optional,
     "AdapterName": [existing adapter name],

     "ResultDataTableName": [name of resulting table in the DataSet],

     "CustomSubstVarsAsCommaSeparatedPairs": [comma separated list of key value pairs as
substitution variables with the following format: "VariableName1=[VariableValue1],VariableName2=
[VariableValue2],..."] - Optional
 }
```

Example:

```
{
    "BaseWebServerUrl": "http://localhost:50528/OneStream",

    "ApplicationName": "GolfStream_v37",

    "IsSystemLevel": "False",

    "AdapterName": "ActivityClassListing_PLP",

    "ResultDataTableName": "ResultsTable",

    "CustomSubstVarsAsCommaSeparatedPairs": ""

}
```

6. Click Send and observe the response at the bottom pane. If successful, a JSON data table will be returned otherwise a descriptive error message will show. More details will be logged in the Error and Activity logs.

   This is a returned response from the request using the above body example in Postman:

```
{
    "ResultsTable": [
        {
            "ClassID": "100_Salary",

            "Name": "100 - Salary",

            "Description": "100 - Salary",

            "ValueType": 0,

            "ValueTypeName": "Wage Percentage",

            "ClassItemID": "79b612b9-8cb4-49ca-9a0d-d13c7683a7f2",

            "Description1": "100 - Salary",

            "WeightOrValue": "1",
                "FKAccountID": "Salary_Exp",
                "Flow": "None",
                "IC": "None",
                "UD1": "None",
                "UD2": "None",
                "UD3": "None",
                "UD4": "None",
                "UD5": "None",
                "UD6": "None",
                "UD7": "None",
                "UD8": "None",
                "Sequence": 10.0,
                "FKClassID": "100_Salary"
         },
…
]}}
```

Data Provider GetAdoDataSetForCubeViewCommand endpoint

1. Create new POST request in Postman,
2. Url= http(s)://[servername]:[port]/onestreamapi/api/DataProvider/GetAdoDataSetForCubeViewCommand?api-version=5.2.0
3. Authorization: Type=Bearer Token. Token={{webapi_access_token}}
4. Headers: Content-Type=application/json
5. Body (raw / jSON):

```
{
     "BaseWebServerUrl": [your web server url ],
     "ApplicationName":[your application name],
     "CubeViewName": [existing Cube View name],
     "DataTablePerCubeViewRow ": [if true returns a Data Table Per Cube View row - bool],
     "ResultDataTableName": [name of resulting table in the DataSet],
     "CubeViewDataTableOptions": [set of formatting bolean options for the returned table - Optional],
     "CustomSubstVarsAsCommaSeparatedPairs": [comma separated list of key value pairs as
substitution variables with the following format: "VariableName1=[VariableValue1],VariableName2=
[VariableValue2],..."] - Optional
 }
```

Example:

```
{
    "BaseWebServerUrl": "http://localhost:50528/OneStream",
    "ApplicationName": "GolfStream_v37",
    "CubeViewName": "Gross Margin",
    "DataTablePerCubeViewRow": false,
    "ResultDataTableName": "ResultDataTableNames",
    "CustomSubstVarsAsCommaSeparatedPairs": "",
    "CubeViewDataTableOptions": {
                "IncludeTitle": false,
                "IncludeHeaderLeftLabel1" : true,
                "IncludeHeaderLeftLabel2" : true,
                "IncludeHeaderLeftLabel3" : true,
                "IncludeHeaderLeftLabel4" : true,
                "IncludeHeaderCenterLabel1" : true,
                "IncludeHeaderCenterLabel2" : true,
                "IncludeHeaderCenterLabel3" : true,
                "IncludeHeaderCenterLabel4" : true,
                "IncludeHeaderRightLabel1" : true,
                "IncludeHeaderRightLabel2" : true,
                "IncludeHeaderRightLabel3" : true,
                "IncludeHeaderRightLabel4" : true,
                "IncludePovCube" : true,
                "IncludePovEntity" : true,
                "IncludePovParent" : true,
                "IncludePovCons" : true,
                "IncludePovScenario" : true,
                "IncludePovTime" : true,
                "IncludePovView" : true,
                "IncludePovAccount" : true,
                "IncludePovFlow" : true,
                "IncludePovOrigin" : true,
                        "IncludePovIC" : true,
                        "IncludePovUD1" : true,
                        "IncludePovUD2" : true,
                        "IncludePovUD3" : false,
                        "IncludePovUD4" : true,
                        "IncludePovUD5" : false,
                        "IncludePovUD6" : true,
                        "IncludePovUD7" : false,
                        "IncludePovUD8" : true,
                        "IncludeMemberDetails": true,
                        "IncludeRowNavigationLink" : true,
                        "IncludeHasDataStatus" : true,
                        "IncludeAnnotation" : true,
                        "IncludeAssumptions" : true,
                        "IncludeAuditComment" : true,
                        "IncludeFootnote" : true,
                        "IncludeVarianceExplanation" : true

                }
}
```

6. Click Send and observe the response at the bottom pane. If successful, a JSON data table will be returned otherwise a descriptive error message will show. More details will be logged in the Error and Activity logs.

   This is a returned response from the request using the above body example in Postman:

   ```
   {
       "ResultDataTableNames": [
           {
               "RowId": 0,
               "RowName": "Row1",
               "HeaderLeftLabel1": "",
               "HeaderLeftLabel2": "",
               "HeaderLeftLabel3": "",
               "HeaderLeftLabel4": "",
               "HeaderCenterLabel1": "",
               "HeaderCenterLabel2": "",
               "HeaderCenterLabel3": "",
   ```

```
                    "HeaderCenterLabel4": "",
                    "HeaderRightLabel1": "",
                    "HeaderRightLabel2": "",
                    "HeaderRightLabel3": "",
                    "HeaderRightLabel4": "",
                    "PovCubeId": 5,
                    …
                    "Col8VarianceExplanation": ""
            },
…
] } }
```

Data Provider GetAdoDataSetForSqlCommand endpoint

1. Create new POST request in Postman,
2. Url= http(s)://[servername]:[port]/onestreamapi/api/DataProvider/GetAdoDataSetForSqlCommand?api-version=5.2.0
3. Authorization: Type=Bearer Token. Token={{webapi_access_token}}
4. Headers: Content-Type=application/json
5. Body (raw / jSON):

   {
   "**BaseWebServerUrl**": [your web server url],
   "**ApplicationName**":[your application name],
   "**SqlQuery** ": [sql query statement used to return data],
   "**DbLocation**": [specify if data from an external database referenced in the configuration will need to be returned - string - defaults to "Application" - *Optional*],

   "**ResultDataTableName**": [name of resulting table in the DataSet],

   "**XFExternalDBConnectionNam** ": [specify if DbLocation is set to "External”],

   "**CustomSubstVarsAsCommaSeparatedPairs**": [comma separated list of key value pairs as substitution variables with the following format: "VariableName1=[VariableValue1],VariableName2=[VariableValue2],..."] - *Optional*
   }

   Example:

```
{
    "BaseWebServerUrl": "http://localhost:50528/OneStream",
    "ApplicationName": "GolfStream_v37",
    "SQLQuery": "Select TOP 100 * from Cube",
    "ResultDataTableName": "ResultDataTableName",
    "DBLocation": "Application",
    "XFExternalConnectionName": "",
    "CustomSubstVarsAsCommaSeparatedPairs": ""
}
```

6. Click Send and observe the response at the bottom pane. If successful, a JSON data table will be returned otherwise a descriptive error message will show. More details will be logged in the Error and Activity logs.

   This is a returned response from the request using the above body example in Postman:

```
{
    "ResultDataTableName": [
        {
            "CubeId": 0,
            "Name": "Houston",
            "Description": "Houston Clubs",
            "CubeType": 0,
            "IsTopLevelCube": false,
            "TimeDimProfileID": "664c9bd4-a314-4941-81be-513aeddac13a",
            "AccessGroupUniqueID": "e31054d8-83bf-4f79-b563-0e450342de9e",
            "MaintenanceGroupUniqueID": "e31054d8-83bf-4f79-b563-0e450342de9e",
            "ConsAlgorithmType": 0,
            "TransAlgorithmType": 0,
            "CalcNoneConsIfNoData": false,
            "CalcLocalCurrIfNoData": true,
            "CalcTransCurrsIfNoData": false,
            "CalcOwnerPreAdjIfNoData": false,
            "CalcShareIfNoData": false,
            "CalcElimIfNoData": false,
            "CalcOwnerPostAdjIfNoData": false,
            "BR1Name": "CorporateBusinessRules",
            "BR2Name": "",
            "BR3Name": "",
            "BR4Name": "",
            "BR5Name": "",
            "BR6Name": "",
            "BR7Name": "",
            "BR8Name": "",
            "DefaultCurrencyId": 176,
            "FxRateTypeIDForRevExp": "89ce1f1c-c1cb-438e-9825-e00861a4fa5b",
            "FxRuleTypeIdForRevExp": 1,
            "FxRateTypeIDForAssetLiab": "89ce1f1c-c1cb-438e-9825-e00861a4fa5b",
            "FxRuleTypeIdForAssetLiab": 0,
            "XmlData": ""
        },
...
] } }
```

> **IMPORTANT:** The Administrator role is required for this functionality.

Data Provider GetAdoDataSetForMethodCommand endpoint

1. Create new POST request in Postman,
2. Url= http(s)://[servername]:[port]/onestreamapi/api/DataProvider/GetAdoDataSetForMethodCommand?api-version=5.2.0
3. Authorization: Type=Bearer Token. Token={{webapi_access_token}}
4. Headers: Content-Type=application/json
5. Body (raw / jSON):

```
{
     "BaseWebServerUrl": [your web server url ],
     "ApplicationName":[your application name],

     "MethodQuery":[method query to return data],
     "XFCommandMethodTypeId": [pre-defined list of XF method commands used by    XFDataProvider to
fill a DataSet],
     "ResultDataTableName": [name of resulting table in the DataSet],

     "CustomSubstVarsAsCommaSeparatedPairs": [comma separated list of key value pairs as
substitution variables with the following format: "VariableName1=[VariableValue1],VariableName2=
[VariableValue2],..."] - Optional
 }
```

Example:

```
{
    "BaseWebServerUrl": "http://localhost:50528/OneStream",
    "ApplicationName": "GolfStream_v37",
    "MethodQuery ": "{Houston}{Actual}{2018M1}{true}{}",
    "XFCommandMethodTypeId ": "CertificationForWorkflowUnit",
    "ResultDataTableName": "MyResultsTable",
    "CustomSubstVarsAsCommaSeparatedPairs": ""
}
```

```
XFCommandMethodTypeId may take any values from the list below:
"WorkflowCalculationEntities"
"WorkflowConfirmationEntities"
"WorkflowProfileAndDependentProfileEntities"
"WorkflowProfileEntities"
"WorkflowProfiles"
"WorkflowProfileRelatives"
"WorkflowStatus"
"WorkflowStatusTwelvePeriod"
"WorkflowAndEntityStatus
"JournalsForWorkflowUnit"
"FormsStatusForWorkflowUnit"
"ConfirmationForWorkflowUnit"
"CertificationForWorkflowUnit"
"ICMatchingForWorkflowUnit"
"ICMatchingForWorkflowUnitMultiPlug"
"ICMatchingForWorkflowUnitMultiPeriod"
"ICMatchingPlugAccountsForWorkflowUnit"
```

6. Click Send and observe the response at the bottom pane. If successful, a JSON data table will be returned otherwise a descriptive error message will show. More details will be logged in the Error and Activity logs.

   This is a returned response from the request using the above body example in Postman:

```
{
    "MyResultsTable": [
{
    "ProfileName": "Houston",
    "ProfileKey": "2f3a719e-8e26-4d8c-8cc7-4544a4812673",
    "ProfileOrder": 1,
    "ScenarioName": "Actual",
    "ScenarioKey": 0,
    "TimeKey": 2018003000,
    "TimeName": "2018M1",
    "CertProfileKey": "003e0a15-6c9a-412c-90ba-64d31040c314",
    "CertName": "Plant Certification",
    "CertDescription": "Plant Certification",
    "CertSignOffState": "Inprocess",
    "CertIsCertified": false,
    "CertCanCertify": false,
    "CertIsParentCertified": false,
    "CertAreDependantsCertified": false,
    "CertAllAnswered": false,
    "CertQuestionCount": 3,
    "CertUnansweredCount": 3,
    "CertUnansweredRate": 1.0,
    "GroupKey": "7c7fedcd-f04a-4f5b-ba13-ed1097f449a9",
    "GroupName": "SOX Plant Controller",
    "GroupDescription": "SOX Plant Controller",
    "GroupSignOffState": "Inprocess",
    "GroupAllAnswered": false,
    "GroupQuestionCount": 3,
    "GroupUnansweredCount": 3,
    "GroupUnansweredRate": 1.0,
    "QuestionUniqueID": "8a92f59c-2419-49d2-87b7-1cdfb21c7072",
    "QuestionName": "Unusual Transactions",
    "QuestionCategory": "InternalAudit",
    "QuestionRiskLevel": "High",
    "QuestionFrequency": "AllTimePeriods",
    "TimeFilterForReqtFreq": "",
    "QuestionText": "Any unusual transactions booked? If so, explain. ",
    "QuestionResponse": "-1",
    "QuestionComments": "",
    "QuestionResponseOptional": false,
    "QuestionDeactivated": false,
    "QuestionDeactivationDate": "1900-01-01T00:00:00",
    "QuestionDisplayOrder": 10
},
{
    "ProfileName": "Houston",
    "ProfileKey": "2f3a719e-8e26-4d8c-8cc7-4544a4812673",
    "ProfileOrder": 1,
    "ScenarioName": "Actual",
    "ScenarioKey": 0,
    "TimeKey": 2018003000,
    "TimeName": "2018M1",
    "CertProfileKey": "003e0a15-6c9a-412c-90ba-64d31040c314",
    "CertName": "Plant Certification",
    "CertDescription": "Plant Certification",
    "CertSignOffState": "Inprocess",
    "CertIsCertified": false,
    "CertCanCertify": false,
    "CertIsParentCertified": false,
    "CertAreDependantsCertified": false,
    "CertAllAnswered": false,
    "CertQuestionCount": 3,
    "CertUnansweredCount": 3,
    "CertUnansweredRate": 1.0,
    "GroupKey": "7c7fedcd-f04a-4f5b-ba13-ed1097f449a9",
    "GroupName": "SOX Plant Controller",
    "GroupDescription": "SOX Plant Controller",
    "GroupSignOffState": "Inprocess",
    "GroupAllAnswered": false,
    "GroupQuestionCount": 3,
    "GroupUnansweredCount": 3,
    "GroupUnansweredRate": 1.0,
    "QuestionUniqueID": "78e102c2-cda5-4c07-b853-416d83de5706",
    "QuestionName": "Audit Transactions",
    "QuestionCategory": "ExternalAudit",
    "QuestionRiskLevel": "High",
    "QuestionFrequency": "AllTimePeriods",
    "TimeFilterForReqtFreq": "",
    "QuestionText": "Any transactions to be reviewed by external audit? If so, explain. ",
    "QuestionResponse": "-1",
    "QuestionComments": "",
    "QuestionResponseOptional": false,
    "QuestionDeactivated": false,
    "QuestionDeactivationDate": "1900-01-01T00:00:00",
    "QuestionDisplayOrder": 20
},
{
    "ProfileName": "Houston",
    "ProfileKey": "2f3a719e-8e26-4d8c-8cc7-4544a4812673",
    "ProfileOrder": 1,
    "ScenarioName": "Actual",
    "ScenarioKey": 0,
    "TimeKey": 2018003000,
    "TimeName": "2018M1",
    "CertProfileKey": "003e0a15-6c9a-412c-90ba-64d31040c314",
    "CertName": "Plant Certification",
    "CertDescription": "Plant Certification",
    "CertSignOffState": "Inprocess",
    "CertIsCertified": false,
    "CertCanCertify": false,
    "CertIsParentCertified": false,
    "CertAreDependantsCertified": false,
    "CertAllAnswered": false,
    "CertQuestionCount": 3,
    "CertUnansweredCount": 3,
    "CertUnansweredRate": 1.0,
    "GroupKey": "7c7fedcd-f04a-4f5b-ba13-ed1097f449a9",
        "GroupName": "SOX Plant Controller",
        "GroupDescription": "SOX Plant Controller",
        "GroupSignOffState": "Inprocess",
        "GroupAllAnswered": false,
        "GroupQuestionCount": 3,
        "GroupUnansweredCount": 3,
        "GroupUnansweredRate": 1.0,
        "QuestionUniqueID": "3d9c4dcc-75fd-4568-b224-f7e428622917",
        "QuestionName": "Key Data Review",
        "QuestionCategory": "FinancialStatementReview",
        "QuestionRiskLevel": "MediumLow",
        "QuestionFrequency": "AllTimePeriods",
        "TimeFilterForReqtFreq": "",
        "QuestionText": "Have all key metrics been reviewed? ",
        "QuestionResponse": "-1",
        "QuestionComments": "",
        "QuestionResponseOptional": false,
        "QuestionDeactivated": false,
        "QuestionDeactivationDate": "1900-01-01T00:00:00",
        "QuestionDisplayOrder": 30
    }
],
"MyResultsTable_SignOffCert": [
    {
        "ProfileKey": "2f3a719e-8e26-4d8c-8cc7-4544a4812673",
        "ScenarioKey": 0,
        "TimeKey": 2018003000,
        "CertProfileKey": "003e0a15-6c9a-412c-90ba-64d31040c314",
        "SignOffState": "Inprocess",
        "Comments": "Sign-Off Initialized",
        "UserKey": "2b61ed59-63ae-46f2-89aa-a8ee9f14bacd",
        "UserName": "TestUserOkta",
        "UserIPAddress": "8d3d857e-cd62-4fd9-a2ec-43b46217a036",
        "TimeStamp": "2019-11-18T14:45:00.007"
    }
],
"MyResultsTable_SignOffGroups": [
    {
        "ProfileKey": "2f3a719e-8e26-4d8c-8cc7-4544a4812673",
        "ScenarioKey": 0,
        "TimeKey": 2018003000,
        "CertProfileKey": "003e0a15-6c9a-412c-90ba-64d31040c314",
        "CertProfileName": "Plant Certification",
        "GroupKey": "7c7fedcd-f04a-4f5b-ba13-ed1097f449a9",
        "GroupName": "SOX Plant Controller",
        "SignOffState": "Inprocess",
        "Comments": "Sign-Off Initialized",
        "UserKey": "2b61ed59-63ae-46f2-89aa-a8ee9f14bacd",
        "UserName": "TestUserOkta",
        "UserIPAddress": "8d3d857e-cd62-4fd9-a2ec-43b46217a036",
        "TimeStamp": "2019-11-18T14:45:00.2"
    }
]
}
```

IMPORTANT: The Administrator role is required for this functionality.

Authentication Execute LogonAndReturnCookie endpoint

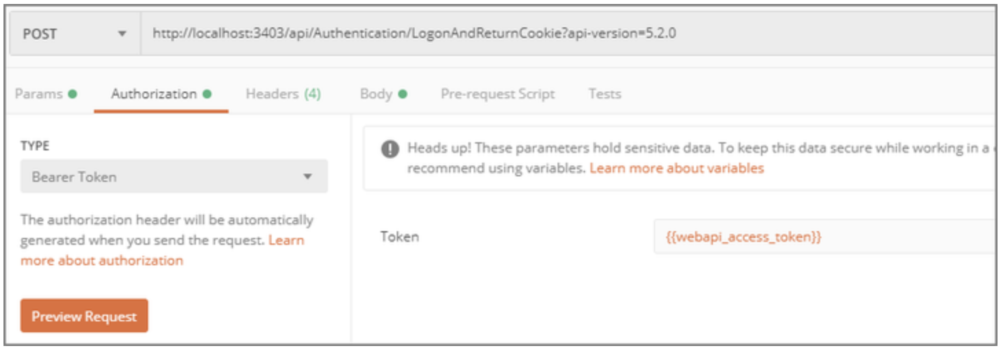
Returns a message that indicates authentication state. Used mostly to verify the installation of web API completed successfully.

1. Create new POST request in Postman,
2. Url= http(s)://[servername]:[port]/OneStreamApi/api/Authentication/LogonAndReturnCookie?api-version=5.2.0
3. Authorization: Type=Bearer Token. Token={{webapi_access_token}}
4. Headers: Content-Type=application/json
5. Body (raw / jSON):

Arguments:
"**BaseWebServerUrl**": [your web server url],
"**ApplicationName**" : [name of Application attempted to access]

<response code="200">Returns a JSON representation of the resulting DataSet.</response>
<response code="400">Bad Request. Missing Authentication arguments. </response>
<response code="500">Error Message. Authentication Failed. Please check the Error Log for more details</response>

Click Send and observe the response at the bottom pane. If successful, a message that indicates authentication state will be returned. Otherwise the error message will be shown. More details will be logged in the Error and Activity logs.



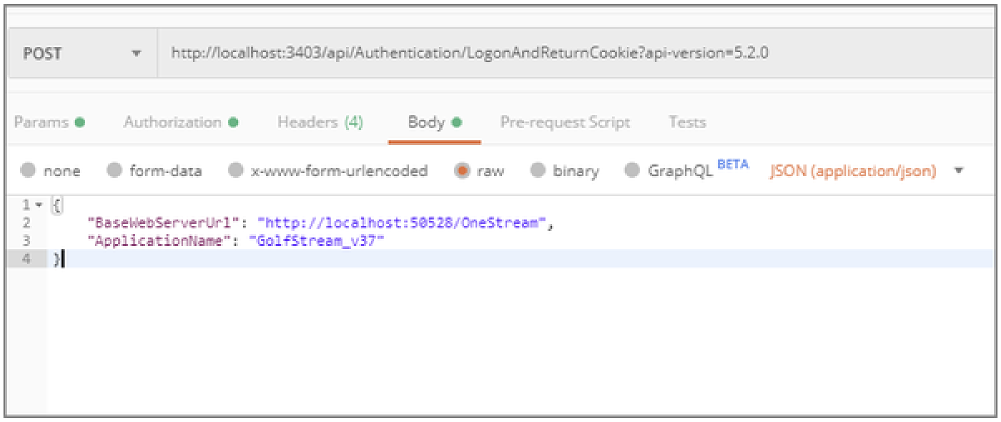
POST http://localhost:3403/api/Authentication/LogonAndReturnCookie?api-version=5.2.0

TYPE
Bearer Token

The authorization header will be automatically generated when you send the request. Learn more about authorization

Heads up! These parameters hold sensitive data. To keep this data secure while working in a
recommend using variables. Learn more about variables

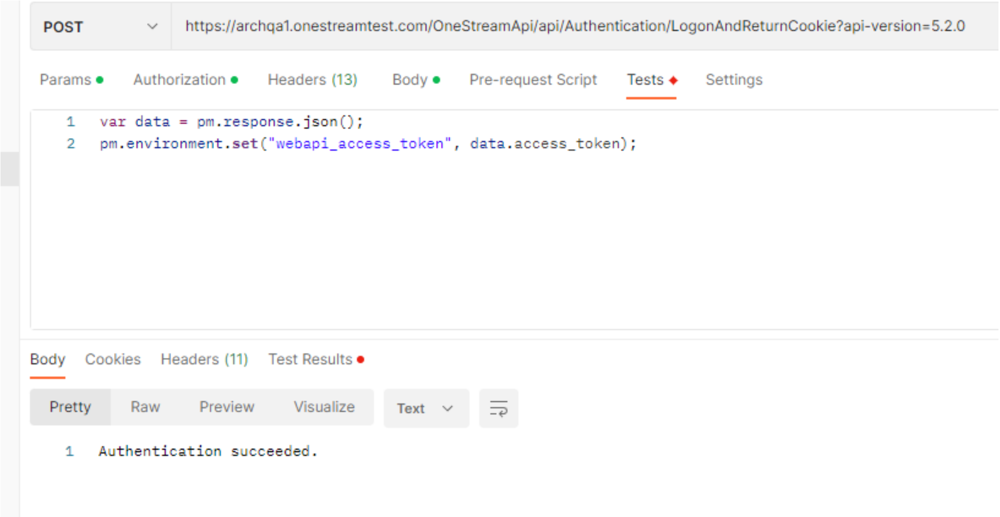
Token {{webapi_access_token}}



POST http://localhost:3403/api/Authentication/LogonAndReturnCookie?api-version=5.2.0

○ none ○ form-data ○ x-www-form-urlencoded ● raw ○ binary ○ GraphQL BETA JSON (application/json)

```
{
    "BaseWebServerUrl": "http://localhost:50528/OneStream",
    "ApplicationName": "GolfStream_v37"
}
```



https://archqa1.onestreamtest.com/OneStreamApi/api/Authentication/LogonAndReturnCookie?api-version=5.2.0

```
var data = pm.response.json();
pm.environment.set("webapi_access_token", data.access_token);
```

```
Authentication succeeded.
```

Configure OneStream API for External Authentication

For customers in a self-hosted environment, we support REST API authentication with Azure Active Directory (Azure AD), Okta, and PingFederate. Perform the configuration for your provider:

- Azure AD Configuration
- Okta Configuration
- PingFederate Configuration

For customers in a OneStream-hosted environment, see the *Identity and Access Management Guide* for information about authentication with OneStream IdentityServer and using personal access tokens (PATs).

Azure AD Configuration

To configure OneStream REST API to support Azure AD authentication, follow these steps:

1. Configure the REST API Application Registration in Azure AD.
2. Set Up the Web Server Configuration in OneStream.
3. Configure the User in OneStream.

To enable single sign-on with Azure AD for the OneStream Desktop application, which includes the Windows Client application and the Excel Add-In, using OIDC protocol, see the *Installation and Configuration Guide*.

Configure the REST API Application Registration in Azure AD

To configure the REST API application registration, you need to copy the application (client) ID from Azure AD and paste it into the Web Server Configuration in OneStream.

1. Log into your Azure AD account.
2. On the Home screen, click the **App registrations** icon.
3. On the **App registrations** page, click the **+ New registration** tab.
4. On the **Register an application** page, complete the following fields:
   a. Enter a name for the application.
   b. For **Supported account types**, select **Accounts in this organization directory only**.
5. Click the **Register** button.
6. On the page for the application, in the **Manage** list on the left, select **Authentication**.
7. In the **Advanced settings**, under **Allow public client flows**, set the **Enable the following mobile and desktop flows** option to **Yes**.
8. Click the **Save** button.
9. In the **Manage** list on the left, select **Certificates & secrets**.
10. In the **Client secrets** tab, click **+ New client secret**.
11. In the **Add a client secret** dialog box, enter a description and select an expiration time in the drop-down menu. Click the **Add** button.
12. On the **Certificates & secrets** page, copy the value for the client secret.

    > **IMPORTANT:** The client secret value may only be available to copy for a limited time, so copy it immediately after it is created.

13. In the **Manage** list on the left, select **Expose an API**.
14. In **Scopes defined by this API**, click **+ Add a scope**.
15. In the **Add a scope** dialog box, the application ID URI is automatically generated. Click the **Save and continue** button.

    > **NOTE:** You can add a scope in this dialog box if needed.

16. On the **Expose an API** page, copy the application ID URI.

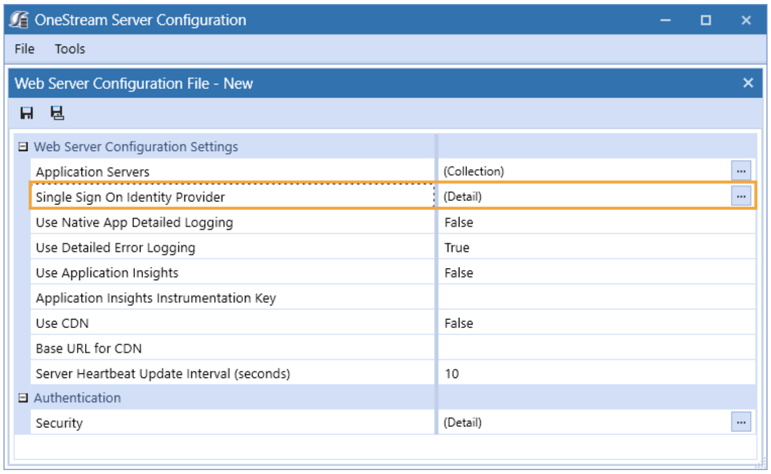
Set Up the Web Server Configuration in OneStream

1. Open the **OneStream Server Configuration Utility** application.

2. Go to **File** > **New Web Server Configuration File**.

   > **NOTE:** Alternatively, you can open an existing file to edit it.

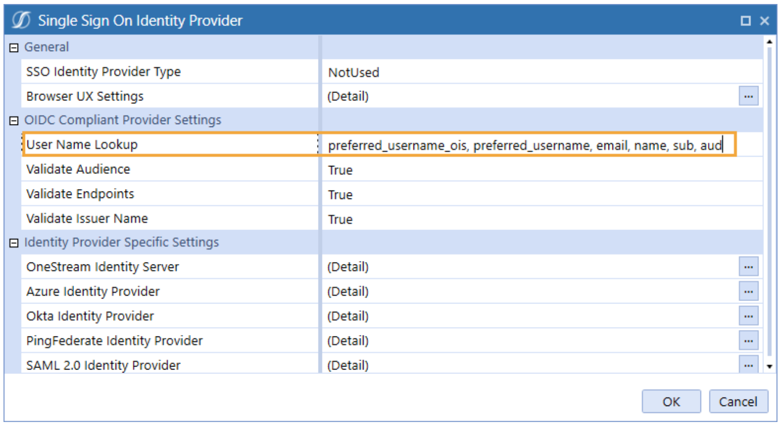
3. In the **Web Server Configuration Settings** section, click the ellipsis to the right of **Single Sign On Identity Provider**.


OneStream Server Configuration
File
Tools
Web Server Configuration File - New

Web Server Configuration Settings	
Application Servers	(Collection)
Single Sign On Identity Provider	(Detail)
Use Native App Detailed Logging	False
Use Detailed Error Logging	True
Use Application Insights	False
Application Insights Instrumentation Key	
Use CDN	False
Base URL for CDN	
Server Heartbeat Update Interval (seconds)	10
Authentication	
Security	(Detail)

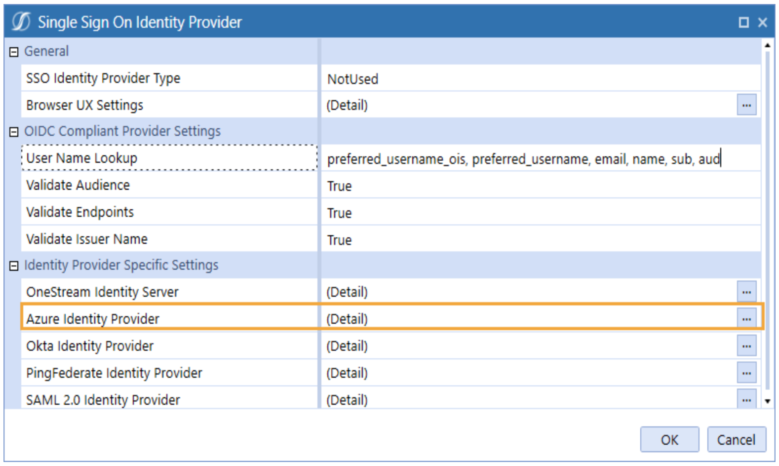
4. In the **User Name Lookup** field, type **aud** to include this claim in the ordered lookups.

   > **NOTE:** The claim **aud** indicates the audience that the token is intended for.



General	
SSO Identity Provider Type	NotUsed
Browser UX Settings	(Detail)
OIDC Compliant Provider Settings	
User Name Lookup	preferred_username_ois, preferred_username, email, name, sub, aud
Validate Audience	True
Validate Endpoints	True
Validate Issuer Name	True
Identity Provider Specific Settings	
OneStream Identity Server	(Detail)
Azure Identity Provider	(Detail)
Okta Identity Provider	(Detail)
PingFederate Identity Provider	(Detail)
SAML 2.0 Identity Provider	(Detail)

5. Click the ellipsis to the right of **Azure Identity Provider**.



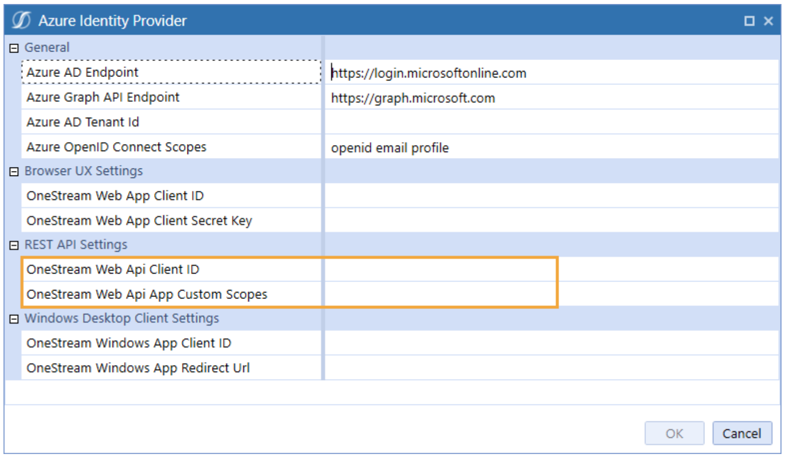
General	
SSO Identity Provider Type	NotUsed
Browser UX Settings	(Detail)
OIDC Compliant Provider Settings	
User Name Lookup	preferred_username_ois, preferred_username, email, name, sub, aud
Validate Audience	True
Validate Endpoints	True
Validate Issuer Name	True
Identity Provider Specific Settings	
OneStream Identity Server	(Detail)
Azure Identity Provider	(Detail)
Okta Identity Provider	(Detail)
PingFederate Identity Provider	(Detail)
SAML 2.0 Identity Provider	(Detail)

6. In the **Azure Identity Provider** dialog box, in the **REST API Settings** section, complete the following fields :

   - **OneStream Web Api Client ID**: Enter the application (client) ID from Azure AD. See Configure the REST API Application Registration in Azure AD step 16.

     > **TIP:** To view the application (client) ID in Azure AD, go to the page for the application and select **Overview** in the list on the left.

- **OneStream Web Api App Custom Scopes**: Enter custom scopes, or leave as default (null).



⊟ General	
Azure AD Endpoint	https://login.microsoftonline.com
Azure Graph API Endpoint	https://graph.microsoft.com
Azure AD Tenant Id	
Azure OpenID Connect Scopes	openid email profile
⊟ Browser UX Settings	
OneStream Web App Client ID	
OneStream Web App Client Secret Key	
⊟ REST API Settings	
OneStream Web Api Client ID	
OneStream Web Api App Custom Scopes	
⊟ Windows Desktop Client Settings	
OneStream Windows App Client ID	
OneStream Windows App Redirect Url	

7. Click the **OK** button.

8. Save changes and reset IIS.

> **NOTE:** Reset IIS after you save any changes to the Application Server Configuration or Web Server Configuration.

Configure the User in OneStream

1. In the OneStream Desktop application, go to **System** > **Security** > **Users** > **<user>**.

2. In the **Authentication** properties, complete the following fields for REST API authentication through Azure AD.

    - **External Authentication Provider**: In the drop-down menu, select the Azure AD configuration.

    - **External Provider User Name**: Enter the application (client) ID from Azure AD. See Configure the REST API Application Registration in Azure AD step 16.

    > **TIP:** To view the application (client) ID in Azure AD, go to the page for the

> application and select **Overview** in the list on the left.

- **Internal Provider Password**: Enter a password.

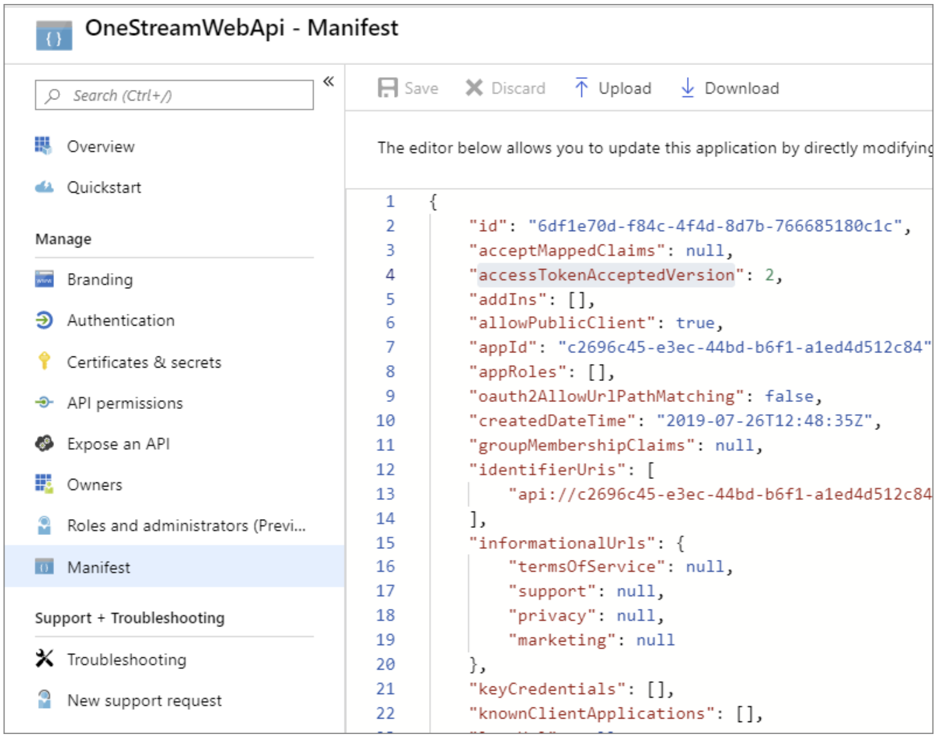
3. Click the **Save** icon.

Azure AD Endpoints

We support v2.0 Azure AD endpoints.

1. On **Manifest**, find **accessTokenAcceptedVersion**.

2. Set the value to **2**.



The editor below allows you to update this application by directly modifying

```
{
    "id": "6df1e70d-f84c-4f4d-8d7b-766685180c1c",
    "acceptMappedClaims": null,
    "accessTokenAcceptedVersion": 2,
    "addIns": [],
    "allowPublicClient": true,
    "appId": "c2696c45-e3ec-44bd-b6f1-a1ed4d512c84"
    "appRoles": [],
    "oauth2AllowUrlPathMatching": false,
    "createdDateTime": "2019-07-26T12:48:35Z",
    "groupMembershipClaims": null,
    "identifierUris": [
        "api://c2696c45-e3ec-44bd-b6f1-a1ed4d512c84
    ],
    "informationalUrls": {
        "termsOfService": null,
        "support": null,
        "privacy": null,
        "marketing": null
    },
    "keyCredentials": [],
    "knownClientApplications": [],
```

3. Click **Save**.

Set Up Postman Access Token Requests

1. Create a new POST request. Set url to https://login.microsoftonline.com/{Tenant Id}/oauth2/v2.0/token with tenant ID value.

   > TIP: To view the directory (tenant) ID in Azure AD, go to the page for the application and select **Overview** in the list on the left.

2. In the Authorization tab, select Basic Auth for type. In the Username and Password fields, enter the client ID and client secret from the application registration, respectively. See Configure the REST API Application Registration in Azure AD step 12.

   > TIP: To view the application (client) ID in Azure AD, go to the page for the application and select **Overview** in the list on the left.

3. In the **Headers** tab, enter the following keys:

   - Accept: application/json
   - Authorization: Basic
   - Content-Type: application/x-www-form-urlencoded

4. In **Body**, enter either option 1 or option 2:

   a. Option 1:

      a. grant_type: client_credentials

      b. scope: {AppId Uri}/.default for machine to machine use case

   b. Option 2:

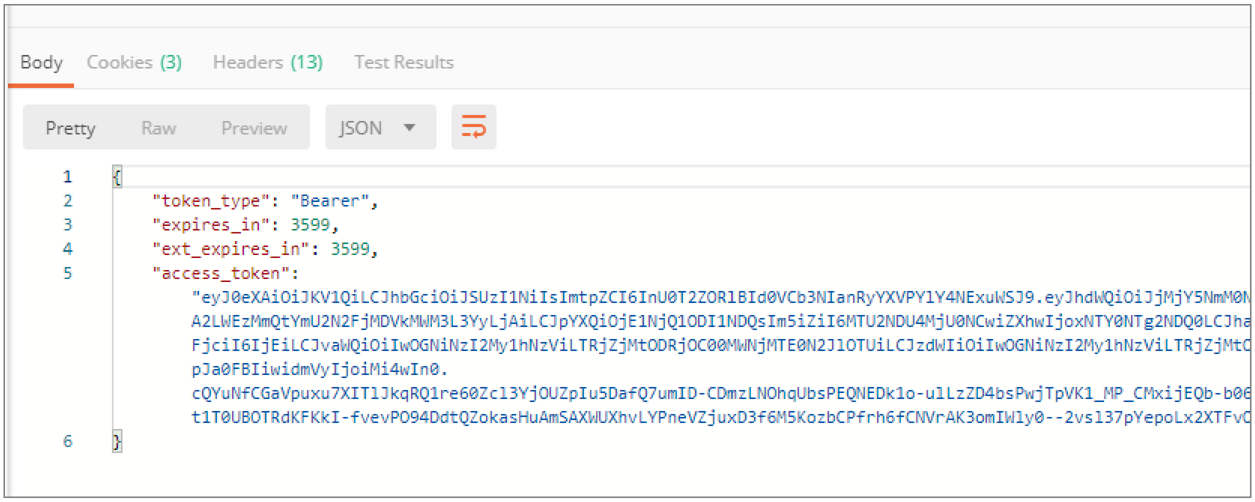
      a. grant_type: password

      b. username: {Azure ad user name}

      c. password: {Azure ad user password}

      d. scope: {custom scope}

5. Click **Send** and notice the value of access_token in the response.



```
{
    "token_type": "Bearer",
    "expires_in": 3599,
    "ext_expires_in": 3599,
    "access_token":
        "eyJ0eXAiOiJKV1QiLCJhbGciOiJSUzI1NiIsImtpZCI6InU0T2ZOR1BId0VCb3NIanRyYXVPY1Y4NExuWSJ9.eyJhdWQiOiJjMjY5NmM0N
        A2LWEzMmQtYmU2N2FjMDVkMWM3L3YyLjAiLCJpYXQiOjE1NjQ1ODI1NDQsIm5iZiI6MTU2NDU4MjU0NCwiZXhwIjoxNTY0NTg2NDQ0LCJha
        FjciI6IjEiLCJvaWQiOiIwOGNiNzI2My1hNzViLTRjZjMtODRjOC00MWNjMTE0N2JlOTUiLCJzdWIiOiIwOGNiNzI2My1hNzViLTRjZjMtO
        pJa0FBIiwidmVyIjoiMi4wIn0.
        cQYuNfCGaVpuxu7XITlJkqRQ1re60Zcl3YjOUZpIu5DafQ7umID-CDmzLNOhqUbsPEQNEDk1o-ulLzZD4bsPwjTpVK1_MP_CMxijEQb-b06
        t1T0UBOTRdKFKkI-fvevPO94DdtQZokasHuAmSAXWUXhvLYPneVZjuxD3f6M5KozbCPfrh6fCNVrAK3omIWly0--2vsl37pYepoLx2XTFvC
}
```

Okta Configuration

To configure OneStream REST API to support Okta authentication for M2M application registration (grant_type = client_credentials), follow these steps:

1. Configure the REST API Application Registration in Okta.
2. Set Up the Web Server Configuration in OneStream.
3. Configure the User in OneStream.

To enable single sign-on with Okta for the OneStream Desktop application, which includes the Windows Client application and the Excel Add-In, using OIDC protocol, see the *Installation and Configuration Guide*.

Configure the REST API Application Registration in Okta

To configure the REST API application registration, you need to copy the client ID from Okta and paste it into the Web Server Configuration in OneStream.

1. Log into your Okta account.
2. In the **Applications** list on the left, select **Applications**.
3. Click **Create App Integration**.

4. In the **Create a new app integration** dialog box, for **Sign-in method**, select **API Services**.

5. Click the **Next** button.

6. On the **New API Services App Integration** page, in the **App integration name** field, enter the name of the Okta API application.

7. Click the **Save** button.

8. Copy the client ID. You will need to paste this into the Web Server Configuration in OneStream.

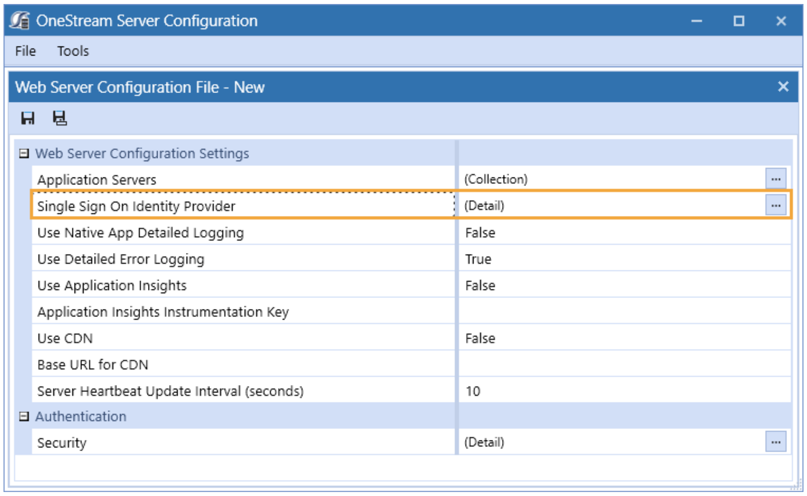
Set Up the Web Server Configuration in OneStream

1. Open the **OneStream Server Configuration Utility** application.

2. Go to **File** > **New Web Server Configuration File**.

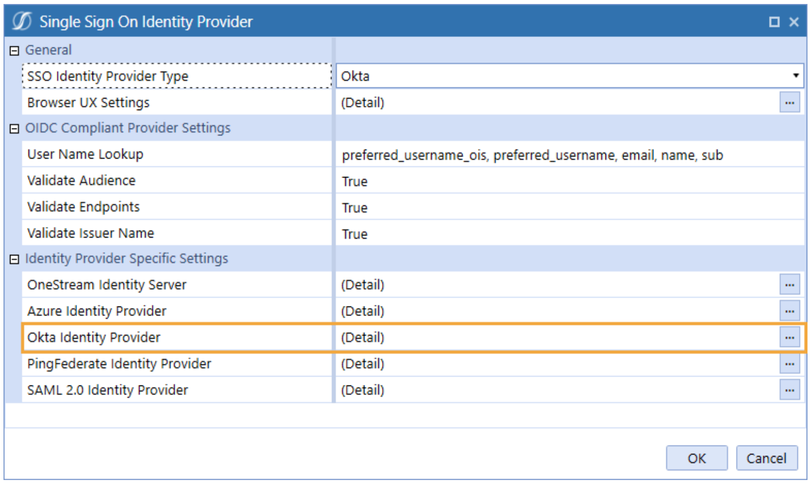
   > **NOTE:** Alternatively, you can open an existing file to edit it.

3. In the **Web Server Configuration Settings** section, click the ellipsis to the right of **Single Sign On Identity Provider**.


OneStream Server Configuration
File
Tools
Web Server Configuration File - New

Web Server Configuration Settings	
Application Servers	(Collection)
Single Sign On Identity Provider	(Detail)
Use Native App Detailed Logging	False
Use Detailed Error Logging	True
Use Application Insights	False
Application Insights Instrumentation Key	
Use CDN	False
Base URL for CDN	
Server Heartbeat Update Interval (seconds)	10
Authentication	
Security	(Detail)

4. Click the ellipsis to the right of **Okta Identity Provider**.



Single Sign On Identity Provider

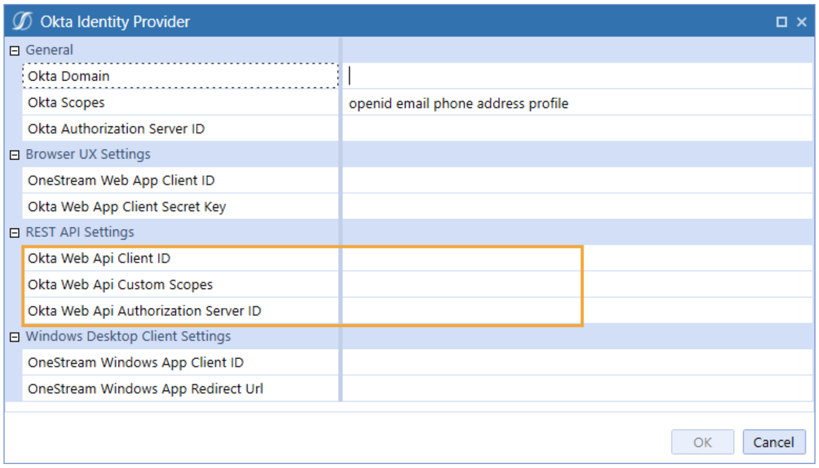
General	
SSO Identity Provider Type	Okta
Browser UX Settings	(Detail)
OIDC Compliant Provider Settings	
User Name Lookup	preferred_username_ois, preferred_username, email, name, sub
Validate Audience	True
Validate Endpoints	True
Validate Issuer Name	True
Identity Provider Specific Settings	
OneStream Identity Server	(Detail)
Azure Identity Provider	(Detail)
Okta Identity Provider	(Detail)
PingFederate Identity Provider	(Detail)
SAML 2.0 Identity Provider	(Detail)

5. In the **Okta Identity Provider** dialog box, in the **REST API Settings** section, complete the following fields:

   - **Okta Web Api Client ID**: Enter the client ID from the Okta application. See Configure the REST API Application Registration in Okta step 8.

   - **Okta Web Api Custom Scopes**: Enter custom scopes, or leave as default (null).

   - **Okta Web Api Authorization Server ID**: Enter the server ID if using a custom authentication server, or leave as default (null).



Okta Identity Provider

General	
Okta Domain	
Okta Scopes	openid email phone address profile
Okta Authorization Server ID	
Browser UX Settings	
OneStream Web App Client ID	
Okta Web App Client Secret Key	
REST API Settings	
Okta Web Api Client ID	
Okta Web Api Custom Scopes	
Okta Web Api Authorization Server ID	
Windows Desktop Client Settings	
OneStream Windows App Client ID	
OneStream Windows App Redirect Url	

6. Click the **OK** button.

7. Save changes and reset IIS.

   > **NOTE:** Reset IIS after you save any changes to the Application Server Configuration or Web Server Configuration.

Configure the User in OneStream

1. In the OneStream Desktop application, go to **System** > **Security** > **Users** > **<user>**.
2. In the **Authentication** properties, complete the following fields for REST API authentication through Okta.
   - **External Authentication Provider**: In the drop-down menu, select the Okta configuration.
   - **External Provider User Name**: Enter the client ID from Okta. See Configure the REST API Application Registration in Okta step 8.
   - **Internal Provider Password**: Enter a password.
3. Click the **Save** icon.

PingFederate Configuration

To configure OneStream REST API to support PingFederate authentication, follow these steps:

1. Configure the REST API Application Registration in PingFederate.
2. Set Up the Web Server Configuration in OneStream.
3. Configure the User in OneStream.

To enable single sign-on with PingFederate for the OneStream Desktop application, which includes the Windows Client application and the Excel Add-In, using OIDC protocol, see the *Installation and Configuration Guide*.

Configure the REST API Application Registration in PingFederate

To configure the REST API application registration, you need to enter the same client ID in PingFederate and the Web Server Configuration in OneStream. You also need to copy the client secret from PingFederate and paste it into the Web Server Configuration in OneStream.

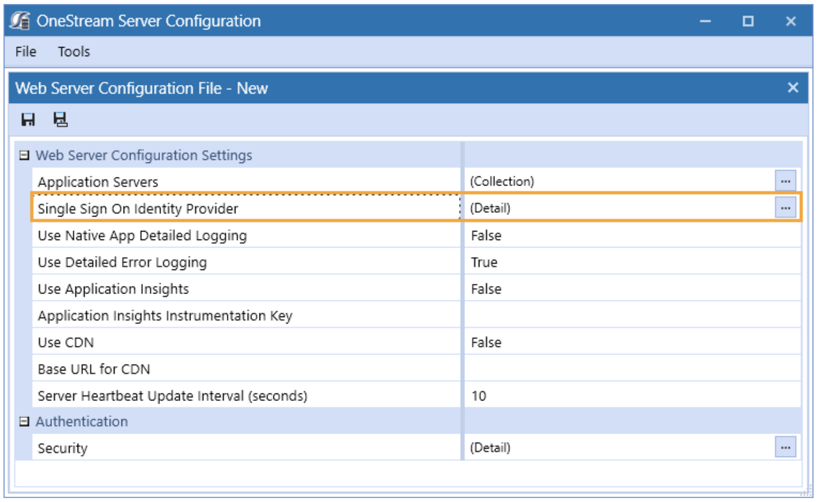
1. Log into your PingFederate account.
2. In the menu on the left, click **OAuth Server**.
3. Under the **CLIENTS** list, click the **Create New** button.
4. On the **Client** page, complete the following fields:
   - **CLIENT ID**: Enter a client ID, which is a unique name or identifier for the application registration.
   - **NAME**: Enter the name of the client.
   - **CLIENT AUTHENTICATION**: Select **CLIENT SECRET**.
   - **CLIENT SECRET**: Select **CHANGE SECRET** and then click the **Generate Secret** button.
   - **ALLOWED GRANT TYPES**: Select **Client Credentials**.
   - **REQUIRE PROOF KEY FOR CODE EXCHANGE (PKCE)**: Select this option.
5. Click the **Save** button.

Set Up the Web Server Configuration in OneStream

1. Open the **OneStream Server Configuration Utility** application.
2. Go to **File** > **New Web Server Configuration File**.

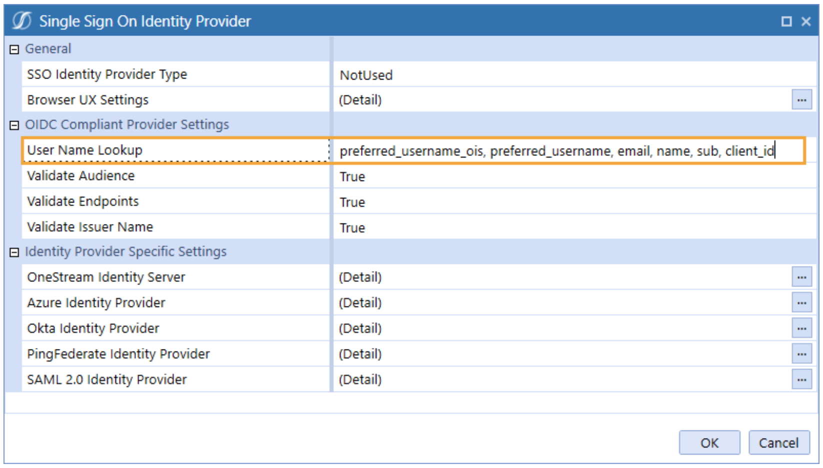
   > **NOTE:** Alternatively, you can open an existing file to edit it.

3. Click the ellipsis to the right of **Single Sign On Identity Provider**.


OneStream Server Configuration
File
Tools
Web Server Configuration File - New

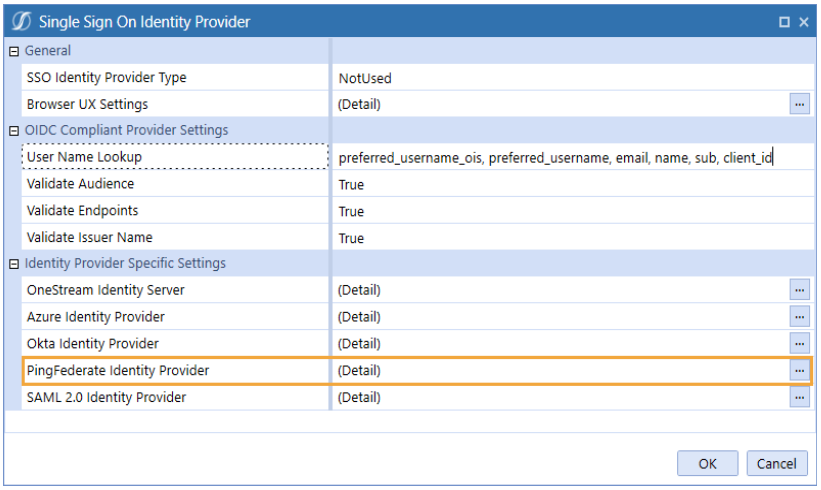
⊟ Web Server Configuration Settings	
Application Servers	(Collection)
Single Sign On Identity Provider	(Detail)
Use Native App Detailed Logging	False
Use Detailed Error Logging	True
Use Application Insights	False
Application Insights Instrumentation Key	
Use CDN	False
Base URL for CDN	
Server Heartbeat Update Interval (seconds)	10
⊟ Authentication	
Security	(Detail)

4. In the **User Name Lookup** field, type **client_id** to include this claim in the ordered lookups.



⊟ General	
SSO Identity Provider Type	NotUsed
Browser UX Settings	(Detail)
⊟ OIDC Compliant Provider Settings	
User Name Lookup	preferred_username_ois, preferred_username, email, name, sub, client_id
Validate Audience	True
Validate Endpoints	True
Validate Issuer Name	True
⊟ Identity Provider Specific Settings	
OneStream Identity Server	(Detail)
Azure Identity Provider	(Detail)
Okta Identity Provider	(Detail)
PingFederate Identity Provider	(Detail)
SAML 2.0 Identity Provider	(Detail)

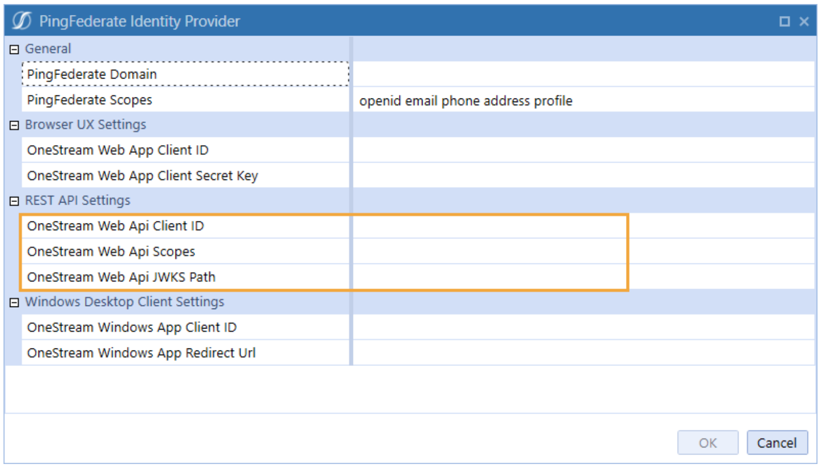
5. Click the ellipsis to the right of **PingFederate Identity Provider**.



General	
SSO Identity Provider Type	NotUsed
Browser UX Settings	(Detail)
OIDC Compliant Provider Settings	
User Name Lookup	preferred_username_ois, preferred_username, email, name, sub, client_id
Validate Audience	True
Validate Endpoints	True
Validate Issuer Name	True
Identity Provider Specific Settings	
OneStream Identity Server	(Detail)
Azure Identity Provider	(Detail)
Okta Identity Provider	(Detail)
PingFederate Identity Provider	(Detail)
SAML 2.0 Identity Provider	(Detail)

6. In the **PingFederate Identity Provider** dialog box, in the **REST API Settings** section, complete the following fields :

   - **OneStream Web Api Client ID**: Enter the client ID you entered in PingFederate. See Configure the REST API Application Registration in PingFederate step 4.
   - **OneStream Web Api Scopes**: Enter custom scopes.
   - **OneStream Web Api JWKS Path**: Enter the path on the PingFederate server to publish a JSON Web Key Set with the keys and certificates used for signature verification.



General	
PingFederate Domain	
PingFederate Scopes	openid email phone address profile
Browser UX Settings	
OneStream Web App Client ID	
OneStream Web App Client Secret Key	
REST API Settings	
OneStream Web Api Client ID	
OneStream Web Api Scopes	
OneStream Web Api JWKS Path	
Windows Desktop Client Settings	
OneStream Windows App Client ID	
OneStream Windows App Redirect Url	

7. Click the **OK** button.

8. Save changes and reset IIS.

   > **NOTE:** Reset IIS after you save any changes to the Application Server Configuration or Web Server Configuration.

Configure the User in OneStream

1. In the OneStream Desktop application, go to **System** > **Security** > **Users** > **<user>**.
2. In the **Authentication** properties, complete the following fields for REST API authentication through PingFederate.

   - **External Authentication Provider**: In the drop-down menu, select the PingFederate configuration.
   - **External Provider User Name**: Enter the client ID you entered in PingFederate. See Configure the REST API Application Registration in PingFederate step 4.
   - **Internal Provider Password**: Enter a password.

3. Click the **Save** icon.

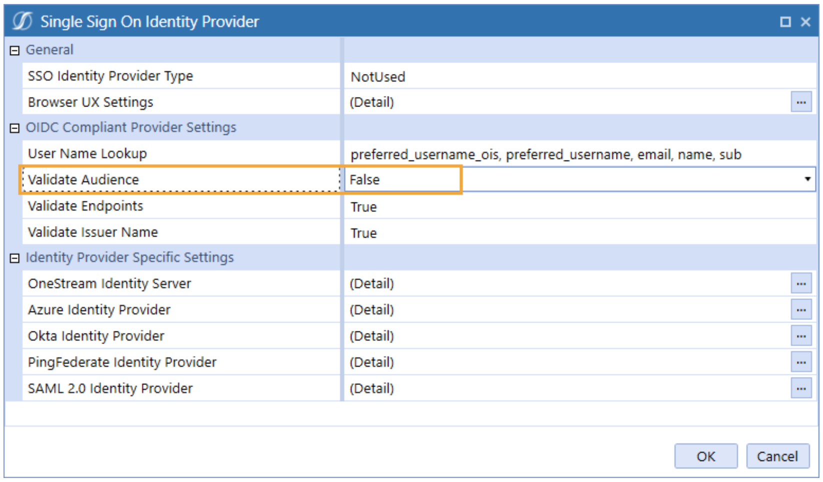
Configure the AUD Value

In some installations, the Audience value is not used in the authentication process. Normal processing will cause authentication to fail if this value is not used. The **Validate Audience** option allows for disabling audience validation for these installations.

By default, this setting is **True**, which means the audience will be validated.

1. Open the **OneStream Server Configuration Utility** application.
2. Go to **File** > **Open Web Server Configuration File**.
3. Find the Web Server Configuration file and click the **Open** button.
4. Click the ellipsis to the right of **Single Sign On Identity Provider**.

5. In **Validate Audience**, select **False** to disable Audience validation.



⊟ General	
SSO Identity Provider Type	NotUsed
Browser UX Settings	(Detail)
⊟ OIDC Compliant Provider Settings	
User Name Lookup	preferred_username_ois, preferred_username, email, name, sub
Validate Audience	False
Validate Endpoints	True
Validate Issuer Name	True
⊟ Identity Provider Specific Settings	
OneStream Identity Server	(Detail)
Azure Identity Provider	(Detail)
Okta Identity Provider	(Detail)
PingFederate Identity Provider	(Detail)
SAML 2.0 Identity Provider	(Detail)