

How to use NPrinting APIs with Qlik REST Connector

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Description

***Notice: NPrinting 2018 February release will contain the required rest connector which resolves an existing bug. It is required to upgrade to this version to leverage the 1.3 Rest Connector.**

(-The following only works in specific versions of Qlik Sense and NPrinting. Please check with a Qlik Integrations/Development TSE with any questions.)

-There is a bug that requires that the Qlik Sense/View Rest connector is manually updated to version 1.3.

1. Download and extract the appropriate Rest Connector for either QlikView or Qlik Sense v1.3 (will be available with the NPrinting Feb. 2018 release).

2. Backup the Existing Rest connector file folder

3. Copy the extracted files to the existing rest connection installation files folder

4. Reboot the server where the installation files are copied to.

When using Qlik Sense REST connector to connect to NPrinting APIs, the connector may show error "Failed to connect to server" or "HTTP protocol error 403 (Forbidden): The : although the same API call works in web browsers or Postman.

According to NPrinting reference page at <http://help.qlik.com/en-US/nprinting/June2017/APIs/NP%20API/>, API users need to call method **GET /login/ntlm** to authenticate themselves for subsequent calls in the same session. However, unlike web browsers or API tools like Postman, Qlik Sense REST connector does not save this session cookie automatically

A work-around is to manually save the cookie after the first authentication call, then add the cookie as a query header in the REST Connector configuration. The following article p can be achieved:

1. NPrinting API only supports Windows NTLM authentication (<http://help.qlik.com/en-US/nprinting/November2017/Content/Extending/Intro-Extending.htm>). In Qlik Sense, when configured with Windows Authentication, the connector always uses credentials of the Qlik Sense service account. Therefore, the first step is to create an NPrinting user association account and grant necessary roles to this user.

Users / QlikSenseServiceAccount

QlikSenseServiceAccount

Overview

Details

Groups

Filters

Roles

User

Email

Username

☐ Change password

Domain account (Service account of Qlik Sense)

Time zone

Locale

2. Create a REST Connector with the following configuration:

- URL: <https://<nPrintingServerAddress>:4993/api/v1/login/ntlm>
- Use Windows Authentication: Yes
- Skip server certificate validation: checked. This is needed because by default, NPrinting uses a self-signed certificate for https connection.

Edit connection (REST) ?

Request

URL

Timeout

Method

Data options

☒ Auto detect response type

Key generation strategy

Authentication

Use Windows authentication

☒ Skip server certificate validation

Use certificate

3. Open the Select data dialog of the newly created REST connector. Check option "Include HTTP response header" and select response field "Set-Cookie". Insert the generated

Select data to load

Response type

Preload symbols count

☒ Include HTTP response header

Tables

Fields

Content-Type	Date	Set-Cookie	Server
application/json; charset=utf-8	Mon, 11 Sep 2017 11:42:42 GMT	NPWEBCONSOLE_XSRF-TOKEN=vl	Microsoft-HTTPAPI/2.0

Field "Set-Cookie" contains 3 cookies returned by NPrinting Server as a single string when GET /login/ntlm is called. The string should look like the following:

```
NPWEBCONSOLE_XSRF-TOKEN=V2pQHT7kUuzI4A+oe28rbyVgIyXMY8gyCdKupWjsIng=; Path=/; Secure,
NPWEBCONSOLE_SESSION=86e4bf552e79e4c1d0acf898a1d8e1fe10029cc4-%00NPWEBCONSOLE_XSRF-
TOKEN%3AV2pQHT7kUuzI4A%2Boe28rbyVgIyXMY8gyCdKupWjsIng%3D%00%00_TS%3Asession%00; Path=/; HttpOnly; Secure,
NPWEBCONSOLE_SESSION=02cf571338171b5f04195cb4c02ca95cf7ee60d6-%00NPWEBCONSOLE_XSRF-
TOKEN%3AV2pQHT7kUuzI4A%2Boe28rbyVgIyXMY8gyCdKupWjsIng%3D%00%00_TS%3Asession%00%00userId%3A0d1021800b6f4ea78c478bef82a3c6f2%00
```

In which, the third cookie (highlighted in yellow, without cookie properties *Path*, *HTTP*, *Secure*) is needed for subsequent API calls. This cookie can be extracted from the string technique in Qlik Sense. For example, the following script extract the cookie into variable vCookie:

```
let vCookieRaw = Peek('Set-Cookie',0,'_response_header');
let vCookie = TextBetween('$ (vCookieRaw)', 'Secure, ', 'Path=/',2);
```

(in this example, '_response_header' is the name of the table generated by the REST connector in step 3)

4. The extracted cookie can then be used as a query header in subsequent API calls. This can be done either by creating a new REST connection, or overriding the current REST CONNECTION keyword.

- New REST connection: create a new REST Connector to the API url that needs to be called. Create a query header named "cookie" and paste the cookie string in step (3) as

Edit connection (REST)

Request

URL

https://qlikserver6:4993/api/v1/apps

Timeout

30

Method

GET

Data options

Auto detect response type

Key generation strategy

Sequence ID

Authentication

Use Windows authentication

Yes

Skip server certificate validation

Use certificate

No

Name

NPrintingAPI_authentication_with_cookie (domain_administrator)

Test Connection

Cancel

Save

Edit connection (REST)

Use Windows authentication

Yes

Skip server certificate validation

Use certificate

No

Pagination

Pagination type

None

Query parameters

Name

Value

Add missing query parameters to final request

Query headers

Name

Value

cookie

NPWEBCONSOLE_SESSION=02cf57

Name

NPrintingAPI_authentication_with_cookie (domain_administrator)

Test Connection

▪ If you don't want to create another REST connector, you can use WITH CONNECTION keyword to override the URL and query header of the existing connector created in st

```
SQL SELECT
    "totalItems",
    "offset",
    "limit",
    "__KEY_data",
    (SELECT
        "id",
        "name",
        "description",
        "created",
        "lastUpdate",
        "__FK_items"
    FROM "items" FK "__FK_items")
FROM JSON (wrap off) "data" PK "__KEY_data"
WITH CONNECTION(
    URL "https://qlikserver6:4993/api/v1/apps",
    HTTPHEADER "cookie" "${vCookie}"
);
```

Please refer to the attached qvf app for an example.

Attachments

[NPrintingAPI_example.qvf](#)

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3/3