

Cecilia Brusatori

Get Data from Report Server to Power BI

Posted on September 4, 2019 by Cecilia Brusatori

If your organization is using SSRS 2017 or Power BI Report Server, you may want to use this API to get data from a dataset already there. We will go through the steps to accomplish this task.

You can find the API documentation: <https://app.swaggerhub.com/apis/microsoft-rs/SSRS/2.0#/>

For this demo, I will bring data from "ContosoSalesStore" dataset:

Contoso Retail - Power BI Repo X

http://localhost/reports/browse/Contoso Retail

Power BI Report Server

★ Favorites Browse

Contoso Retail

Home > Contoso Retail

PAGINATED REPORTS (1)

Sales Detail

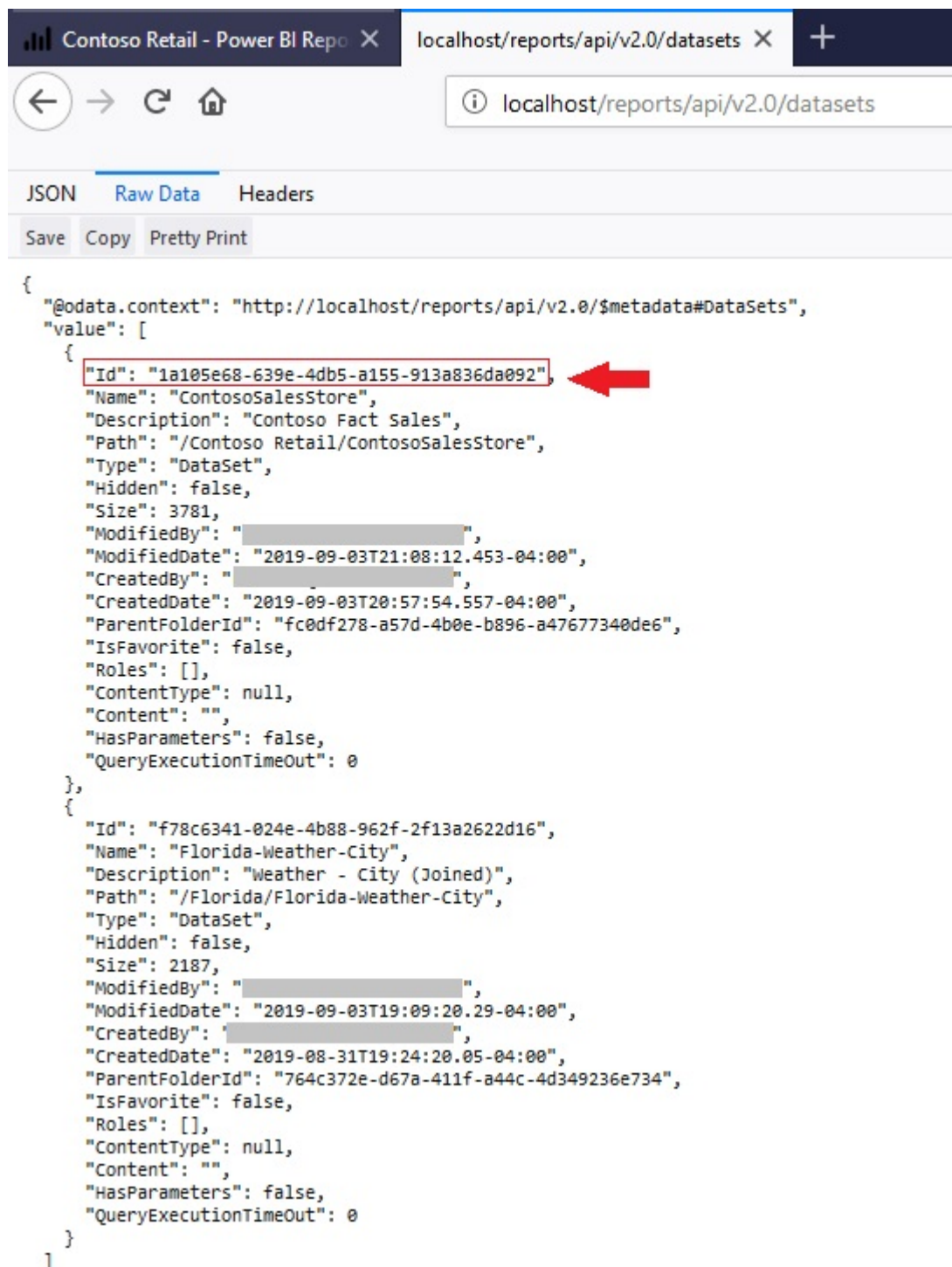
DATASETS (1)

ContosoSalesStore

DATA SOURCES (1)

SS17ContosoRetail

Go to your browser, use the URL to access your report server, add `"/api/v2.0/datasets"` to navigate the datasets available and identify the ID for the one you want to connect to. (`localhost/reports/api/v2.0`)



```

{
  "@odata.context": "http://localhost/reports/api/v2.0/$metadata#DataSets",
  "value": [
    {
      "Id": "1a105e68-639e-4db5-a155-913a836da092",
      "Name": "ContosoSalesStore",
      "Description": "Contoso Fact Sales",
      "Path": "/Contoso Retail/ContosoSalesStore",
      "Type": "DataSet",
      "Hidden": false,
      "Size": 3781,
      "ModifiedBy": " ",
      "ModifiedDate": "2019-09-03T21:08:12.453-04:00",
      "CreatedBy": " ",
      "CreatedDate": "2019-09-03T20:57:54.557-04:00",
      "ParentFolderId": "fc0df278-a57d-4b0e-b896-a47677340de6",
      "IsFavorite": false,
      "Roles": [],
      "ContentType": null,
      "Content": "",
      "HasParameters": false,
      "QueryExecutionTimeout": 0
    },
    {
      "Id": "f78c6341-024e-4b88-962f-2f13a2622d16",
      "Name": "Florida-Weather-City",
      "Description": "Weather - City (Joined)",
      "Path": "/Florida/Florida-Weather-City",
      "Type": "DataSet",
      "Hidden": false,
      "Size": 2187,
      "ModifiedBy": " ",
      "ModifiedDate": "2019-09-03T19:09:20.29-04:00",
      "CreatedBy": " ",
      "CreatedDate": "2019-08-31T19:24:20.05-04:00",
      "ParentFolderId": "764c372e-d67a-411f-a44c-4d349236e734",
      "IsFavorite": false,
      "Roles": [],
      "ContentType": null,
      "Content": "",
      "HasParameters": false,
      "QueryExecutionTimeout": 0
    }
  ]
}

```

Once you identified your dataset, use the "id" to take a look at the dataset by adding
 "api/v2.0/datasets({id})/data" => "http://localhost/reports/api/v2.0/datasets(1a105e68-639e-4db5-a155-913a836da092)/data"

Contoso Retail - Power BI Repo X localhost/reports/api/v2.0/datasets X +

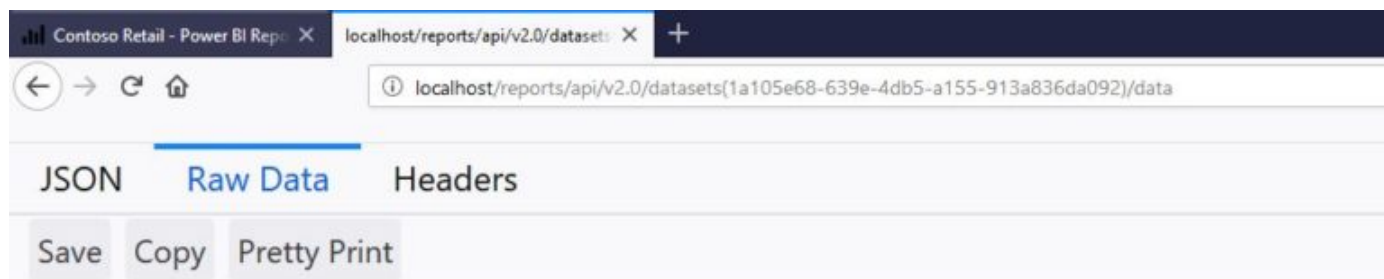
localhost/reports/api/v2.0/datasets(1a105e68-639e-4db5-a155-913a836da092)/data

JSON Raw Data Headers

Save Copy Pretty Print

```
{
  "@odata.context": "http://localhost/reports/api/v2.0/$metadata#DataSetData", "value": [
    {
      "Id": "a622c959-2838-40a6-92b2-0e2ae61b5602", "SalesKey": "48357", "DateKey": "9/8/2007 12:00:00 AM", "channelKey": "1", "StoreKey": "209", "ProductKey": "2098", "PromotionKey": "9", "CurrencyKey": "1", "UnitCost": "258.99", "UnitPrice": "508", "SalesQuantity": "12:00:00 AM", "UpdateDate": "1/1/2010 12:00:00 AM"
    }, {
      "Id": "9fdb5d70-2696-40d7-aaf8-bb3c0257f84e", "SalesKey": "49410", "DateKey": "7/26/2009 12:00:00 AM", "channelKey": "1", "StoreKey": "209", "ProductKey": "2329", "PromotionKey": "1", "CurrencyKey": "1", "UnitCost": "105.76", "UnitPrice": "229.99", "SalesQuantity": "12:00:00 AM", "UpdateDate": "1/1/2010 12:00:00 AM"
    }, {
      "Id": "255cfe66-c5d4-43f4-98dc-5a6e7e97a6b9", "SalesKey": "49511", "DateKey": "9/19/2007 12:00:00 AM", "channelKey": "1", "StoreKey": "209", "ProductKey": "2024", "PromotionKey": "9", "CurrencyKey": "1", "UnitCost": "48.43", "UnitPrice": "94.99", "SalesQuantity": "12:00:00 AM", "UpdateDate": "1/1/2010 12:00:00 AM"
    }, {
      "Id": "6ca85877-7c7c-49e1-87b3-a1dc053f5dd0", "SalesKey": "49678", "DateKey": "1/31/2007 12:00:00 AM", "channelKey": "1", "StoreKey": "209", "ProductKey": "459", "PromotionKey": "10", "CurrencyKey": "1", "UnitCost": "137.6", "UnitPrice": "269.9", "SalesQuantity": "12:00:00 AM", "UpdateDate": "1/1/2010 12:00:00 AM"
    }, {
      "Id": "3044e4e8-d0ec-411a-9e30-91f2a7e47b56", "SalesKey": "50060", "DateKey": "12/19/2007 12:00:00 AM", "channelKey": "1", "StoreKey": "209", "ProductKey": "2235", "PromotionKey": "10", "CurrencyKey": "1", "UnitCost": "52", "UnitPrice": "101.99", "SalesQuantity": "12:00:00 AM", "UpdateDate": "1/1/2010 12:00:00 AM"
    }, {
      "Id": "c39af98f-f308-45e5-9a8c-0e680c6c79dc", "SalesKey": "50670", "DateKey": "11/17/2007 12:00:00 AM"
    }
  ]
}
```

The following is the same content from the previous picture but data is formatted for a better illustration:



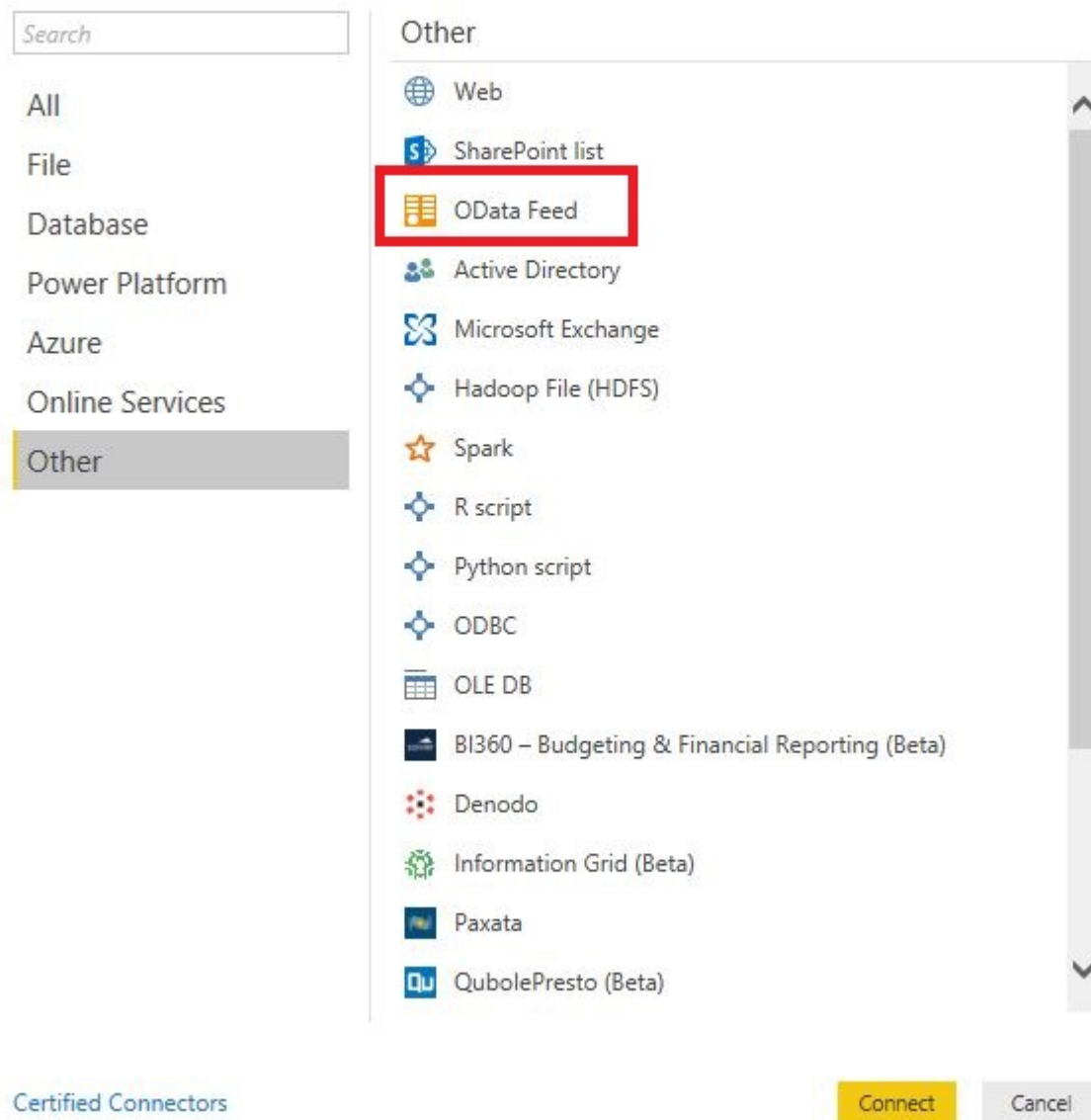
```
{
  "@odata.context": "http://localhost/reports/api/v2.0/$metadata#DataSetData",
  "value": [
    {
      "Id": "a622c959-2838-40a6-92b2-0e2ae61b5602",
      "SalesKey": "48357",
      "DateKey": "9/8/2007 12:00:00 AM",
      "channelKey": "1",
      "StoreKey": "209",
      "ProductKey": "2098",
      "PromotionKey": "9",
      "CurrencyKey": "1",
      "UnitCost": "258.99",
      "UnitPrice": "508",
      "SalesQuantity": "9",
      "ReturnQuantity": "0",
      "ReturnAmount": "0",
      "DiscountQuantity": "1",
      "DiscountAmount": "50.8",
      "TotalCost": "2330.91",
      "SalesAmount": "4521.2",
      "ETLLoadID": "1",
      "LoadDate": "1/1/2010 12:00:00 AM",
      "UpdateDate": "1/1/2010 12:00:00 AM"
    },
    {
      "Id": "9fdb5d70-2696-40d7-aaf8-bb3c0257f84e",
      "SalesKey": "49410",
      "DateKey": "7/26/2009 12:00:00 AM",
      "channelKey": "1",
      "StoreKey": "209",
      "ProductKey": "2329"
    }
  ]
}
```

Once you found the dataset, bring the URL with you to Power BI, this is how mine looks like:

"http://localhost/reports/api/v2.0/datasets(1a105e68-639e-4db5-a155-913a836da092)/data"

In Power BI, go to Get Data > Others > OData Feed:

Get Data



Bring the URL and paste it here:



OData feed

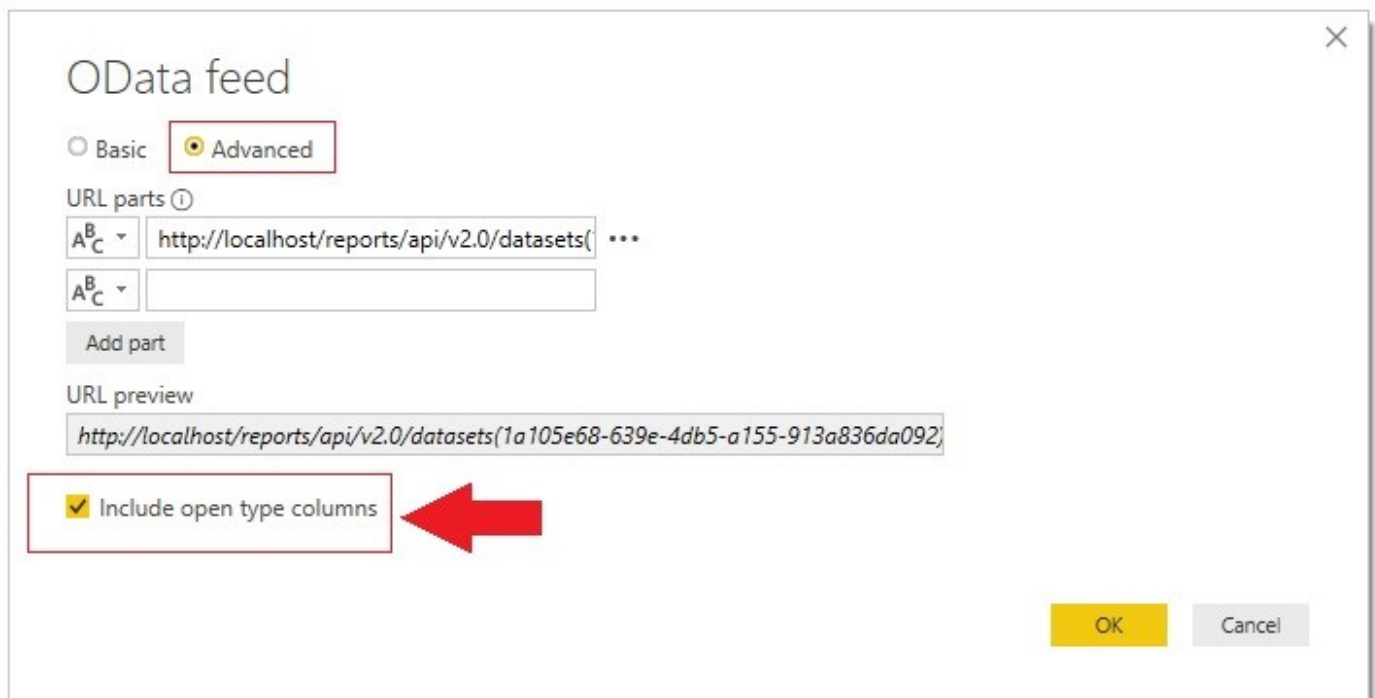
☒ Basic ☐ Advanced

URL

/localhost/reports/api/v2.0/datasets(1a105e68-639e-4db5-a155-913a836da092)/data

OK Cancel

Before clicking ok, we need to go to Advanced and enable "include open type columns" option, otherwise you will see just the first column and you will come back to this post to find out what you missed!



OData feed

☐ Basic ☒ Advanced

URL parts ⓘ

http://localhost/reports/api/v2.0/datasets(...

Add part

URL preview

http://localhost/reports/api/v2.0/datasets(1a105e68-639e-4db5-a155-913a836da092)

☒ Include open type columns

OK Cancel

Edit your credentials if needed, I'm going to leave mine with my Current Windows Credentials, click Connect:

OData feed

Anonymous

Windows

Basic

Web API

Organizational account

http://localhost/reports/api/v2.0/datasets(1a105e68...

The password won't be encrypted when sent.

Use your Windows credentials to access this OData feed.

☒ Use my current credentials

☐ Use alternate credentials

User name

Password

Select which level to apply these settings to

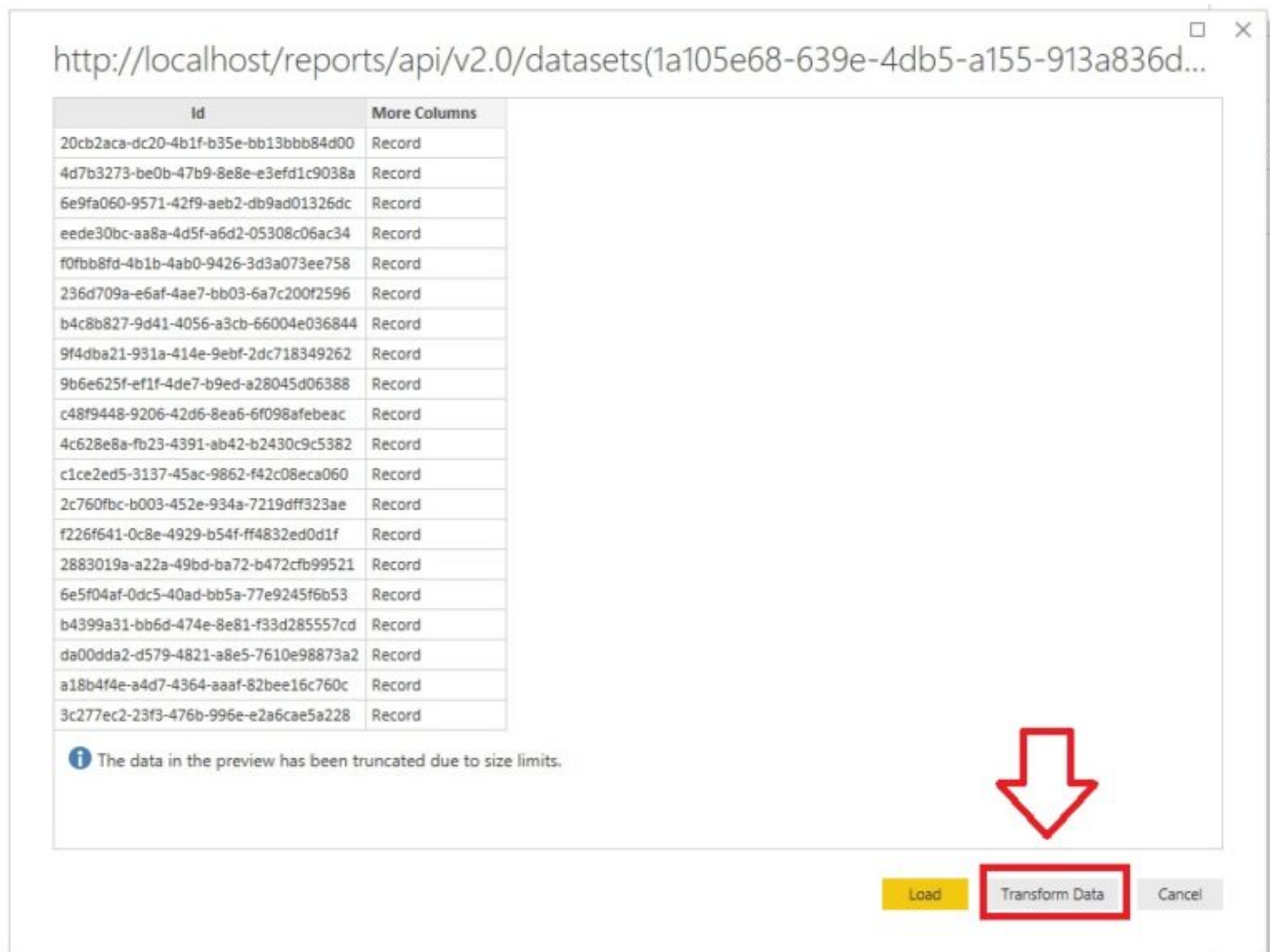
http://localhost/

Back

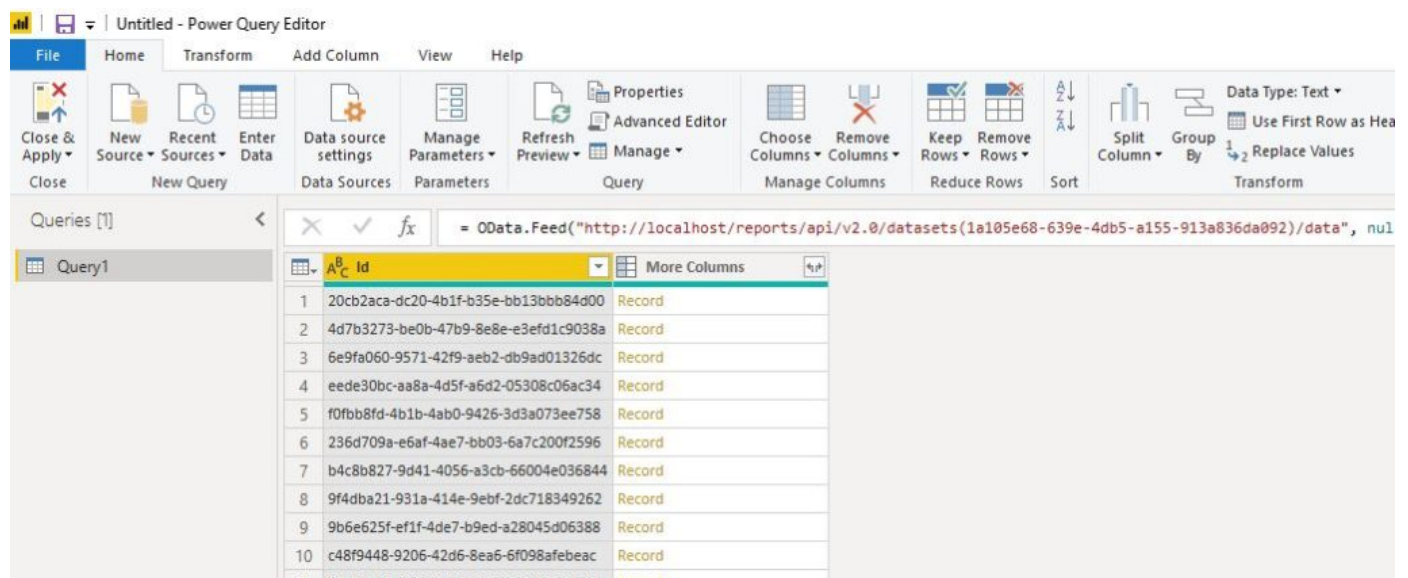
Connect

Cancel

We need to apply a few steps, so let's click on "Transform Data"



See that we brought 2 columns, one has the record id, and the second column has the record that we need to expand



Let's explore one record so you see how it looks like:

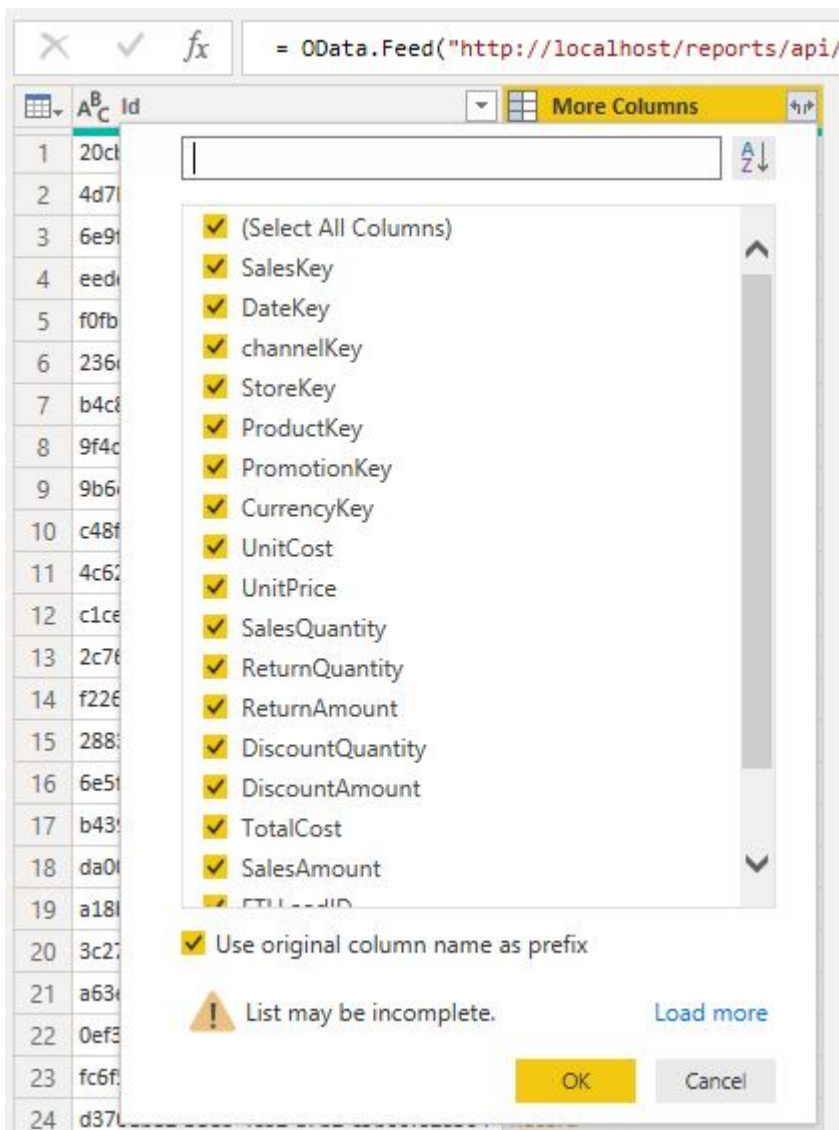
21	ab3e4126-9b5b-42/1-ac0b-bc9a3a1245d5	Record
22	0ef34f4a-53a6-4df4-8ac4-041bb542dfde	Record
23	fc6f5010-bfdc-453f-abce-f5b19230e792	Record
SalesKey		103238
DateKey		6/15/2009 12:00:00 AM
channelKey		1
StoreKey		209
ProductKey		2154
PromotionKey		1
CurrencyKey		1
UnitCost		204.64
UnitPrice		445
SalesQuantity		10
ReturnQuantity		0
ReturnAmount		0
DiscountQuantity		0
DiscountAmount		0
TotalCost		2046.4

offiling based on top 1000 rows

Find the Expand Record Column icon, click on it

X ✓ fx = OData.Feed("http://localhost/reports/api/		
	A ^B C Id	More Columns
1	20cb2aca-dc20-4b1f-b35e-bb13bbb84d00	Record
2	4d7b3273-be0b-47b9-8e8e-e3efd1c9038a	Record
3	6e9fa060-9571-42f9-aeb2-db9ad01326dc	Record
4	eede30bc-aa8a-4d5f-a6d2-05308c06ac34	Record
5	f0fbb8fd-4b1b-4ab0-9426-3d3a073ee758	Record
6	236d709a-e6af-4ae7-bb03-6a7c200f2596	Record
7	b4c8b827-9d41-4056-a3cb-66004e036844	Record
8	9f4dba21-931a-414e-9ebf-2dc718349262	Record
9	9b6e625f-ef1f-4de7-b9ed-a28045d06388	Record
10	c48f9448-9206-42d6-8ea6-6f098afebeac	Record
11	4c628e8a-fb23-4391-ab42-b2430c9c5382	Record
12	c1ce2ed5-3137-45ac-9862-f42c08eca060	Record
13	2c760fbc-b003-452e-934a-7219dff323ae	Record
14	f226f641-0c8e-4929-b54f-ff4832ed0d1f	Record
15	2883019a-a22a-49bd-ba72-b472cfb99521	Record

Note that you can click ok and it will expand and keep all the columns available, or you can just select the ones you want to work with, click ok when ready:



And Voilà! There is our dataset in Power BI!

Table.ExpandRecordColumn(Source, "More Columns", {"SalesKey", "DateKey", "channelKey", "StoreKey", "ProductKey", "PromotionKey", "CurrencyKey", "UnitCost", "UnitPrice", "SalesQuantity"},

	More Columns.SalesKey	More Columns.DateKey	More Columns.channelKey	More Columns.StoreKey	More Columns.ProductKey	More Columns.PromotionKey	More Columns.CurrencyKey	More Columns.UnitCost	More Columns.UnitPrice	More Columns.SalesQuantity
1	20cb2aca-dc20-4b1f-b35e-bb130bb84d00	93867	7/18/2009 12:00:00 AM	1	209	1976	1	1	1	1
2	4d7b3273-be0b-47b9-8e8e-e3efd1c9038a	94127	7/13/2007 12:00:00 AM	1	209	602	1	1	1	1
3	6e9fa060-9571-42f9-aeb2-d99ad01326dc	94220	8/3/2008 12:00:00 AM	1	209	953	18	1	1	1
4	eede30bc-aa8a-4d5f-a6d2-05308c06ac34	94742	12/22/2007 12:00:00 AM	1	209	1603	10	1	1	1
5	10fb08fd-4b1b-4ab0-9426-3d3a073ee758	95082	1/3/2007 12:00:00 AM	1	209	2275	10	1	1	1
6	236d709a-e6af-4ae7-bb03-6a7c200f2596	96641	10/10/2008 12:00:00 AM	1	209	497	19	1	1	1
7	b4c8b827-9d41-4056-a3cb-66004e036844	96769	4/8/2007 12:00:00 AM	1	209	2124	8	1	1	1
8	9f4dba21-931a-414e-9ebf-2dc718349262	97520	5/22/2008 12:00:00 AM	1	209	537	1	1	1	1
9	9b6e625f-ef1f-4de7-b9ed-a28045d06388	98042	5/26/2007 12:00:00 AM	1	209	2033	1	1	1	1
10	c48f9448-9206-42d6-8eae-6f098afebeac	98122	12/23/2009 12:00:00 AM	1	209	959	28	1	1	1
11	4c628e8a-fb23-4391-ab42-b2430c9c5382	98709	12/21/2007 12:00:00 AM	1	209	1435	10	1	1	1
12	c1ce2ed5-3137-45ac-9862-442c08eca060	98919	11/28/2007 12:00:00 AM	1	209	1192	10	1	1	1
13	2c760fbc-b003-452e-934e-7219df323ae	99101	12/12/2007 12:00:00 AM	1	209	193	10	1	1	1
14	f226f641-0c8e-4929-b54f-f4832ed0d1f	99303	6/2/2009 12:00:00 AM	1	209	39	1	1	1	1
15	2883019a-a22a-49bd-ba72-b472cfb99521	99503	11/24/2007 12:00:00 AM	1	209	1125	10	1	1	1
16	6e5f04af-0dc5-40ad-bb5a-77e9245f6b53	99601	6/5/2007 12:00:00 AM	1	209	1953	1	1	1	1
17	b4399a31-bb6d-474e-8e81-f33d285557cd	100201	9/21/2008 12:00:00 AM	1	209	2235	18	1	1	1
18	da00dda2-d579-4821-a8e5-7610e98873...	100294	6/18/2007 12:00:00 AM	1	209	430	1	1	1	1
19	a18b4f4e-a4d7-4364-aaaf-82bee16c760c	100917	5/18/2008 12:00:00 AM	1	209	2056	1	1	1	1
20	3c277ec2-23f3-476b-996e-e2a6cae5a228	101034	7/15/2007 12:00:00 AM	1	209	502	1	1	1	1
21	a63e4126-9b56-4271-ac0b-6c9a3a1245d5	101828	5/18/2007 12:00:00 AM	1	209	568	1	1	1	1
22	0ef34f4a-53a6-4df4-8ac4-041bb542dfde	102953	2/28/2009 12:00:00 AM	1	209	374	26	1	1	1
23	fc6f5010-bfbc-453f-abce-f5b19230e792	103238	6/15/2009 12:00:00 AM	1	209	2154	1	1	1	1
24	d570eb82-58eb-4cb2-a7b2-c5b60f62a564	103301	12/30/2007 12:00:00 AM	1	209	1282	10	1	1	1
25	40106898-50b2-4f86-824e-a06d9d292dc0	103405	5/2/2008 12:00:00 AM	1	209	1217	1	1	1	1

Apply the transformations needed and load it to your model 😊

- PowerBI
- API, Dataset, Power BI, Power BI Report Server, SSRS