



365

Saturday

Jonas Rapp

Cherry Picking XrmToolBox
(and some other helpers)

Jonas Rapp

```
var jonas = (WhoAmIResponse)service.Execute(new WhoAmIRequest());
```

Head of Development, Innofactor SE

Software Developer (1994)

100% MS Dynamics CRM (2009)

XrmToolBox contributor (2014)

Microsoft MVP (2017)

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Email: jonas@jonasrapp.net

Blog: jonasrapp.innofactor.se

XrmToolBox – Tanguy Touzard

Twitter: [@XrmToolBox](https://twitter.com/XrmToolBox)

Web: www.xrmtoolbox.com



If you are not working with
XrmToolBox...

(and some other helpers)

...you are just working too hard.

THANK YOU TO THE COMMUNITY SPONSORS!



eBECS
Total Microsoft Business Solutions

Cognitive Group
Microsoft **Talent** Solutions

SCRIBE X

 **ClickDimensions**

CAFé X

riva
Riva CRM Integration

 **testhouse**
Improving Software Quality

Links and references:

jonas@jonasrapp.net



Why XrmToolBox?

– Administrator/User perspective

Limited CRM admin UI

Bulk actions

Data investigation

Advanced editors

Expose SDK-only features



Why XrmToolBox?

- Customizer/Developer perspective

I really don't like working too hard

Internal tools and gadgets

The toolbox is there to be filled

Open Source

Community collaboration

Getting practical

Installing XrmToolBox

www.xrmtoolbox.com

Download



Unblock



Unpack



Run



Plugins Store

Available tools

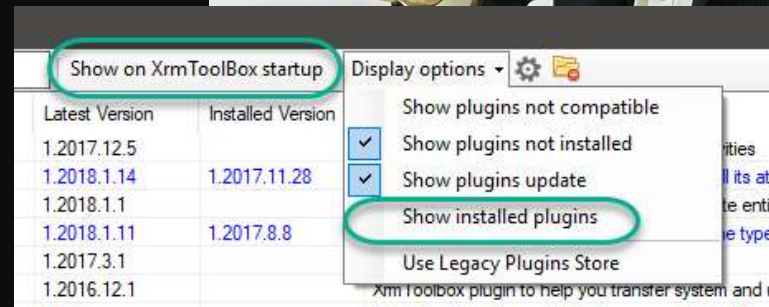
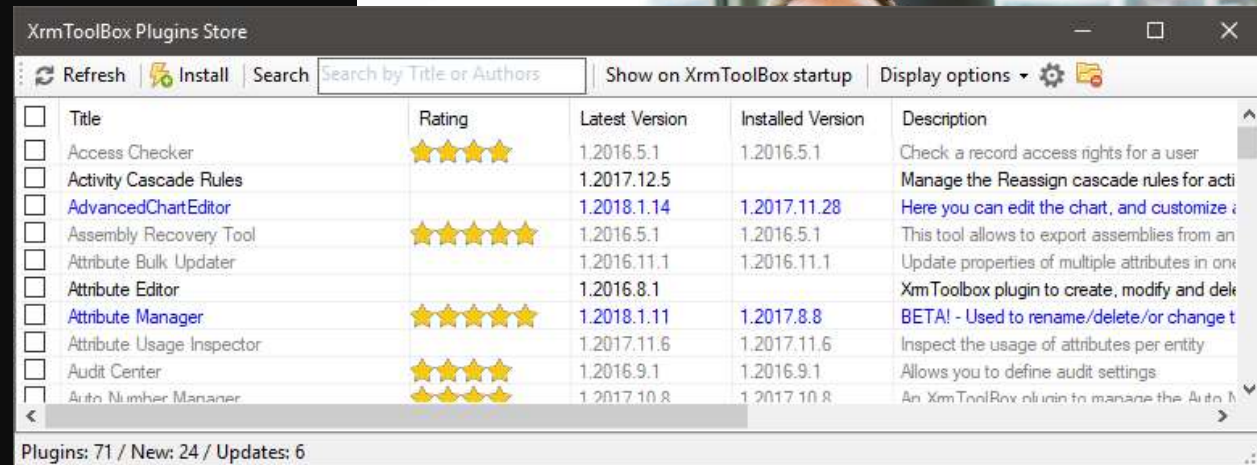
Updated tools

Tool rating

Approved tools (soon)

One-click installation

(downloaded from NuGet)



Rate plugins!

Contribute to the community

www.xrmttoolbox.com

Feedback

XrmToolBox

basics

File Storage

Managed storage area

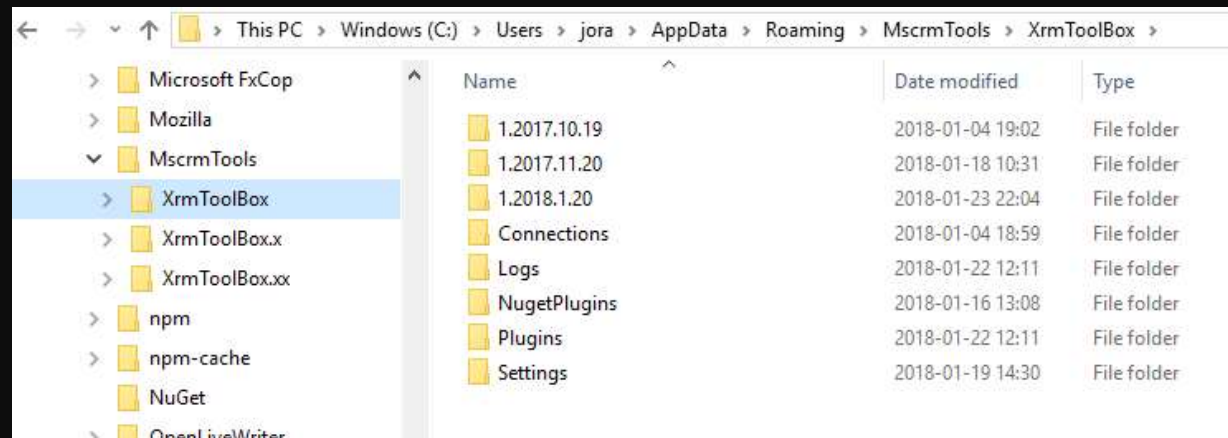
Plugins

Settings

Logs

(Default) Connections

NuGet downloads



File Storage



Managed storage area

%AppData%\MscrmTools\XrmToolBox\

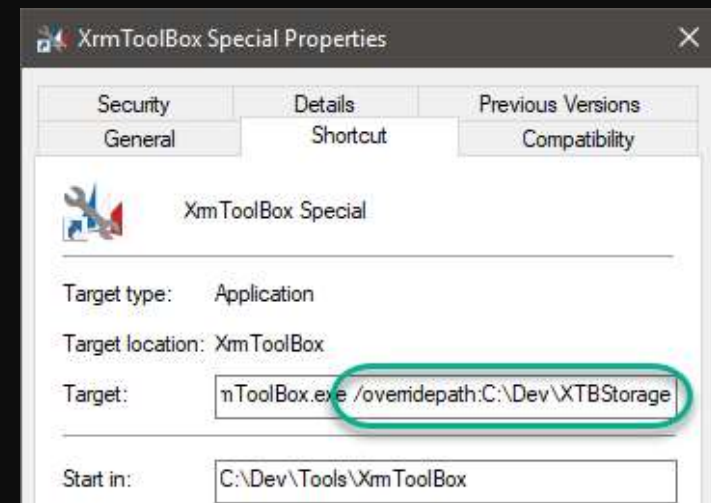
c:\Users\jora\AppData\Roaming\MscrmTools\XrmToolBox\

Override default location

/overridepath:[mypath]

Custom shortcut

Project specific setup



Connection Files

Use them!

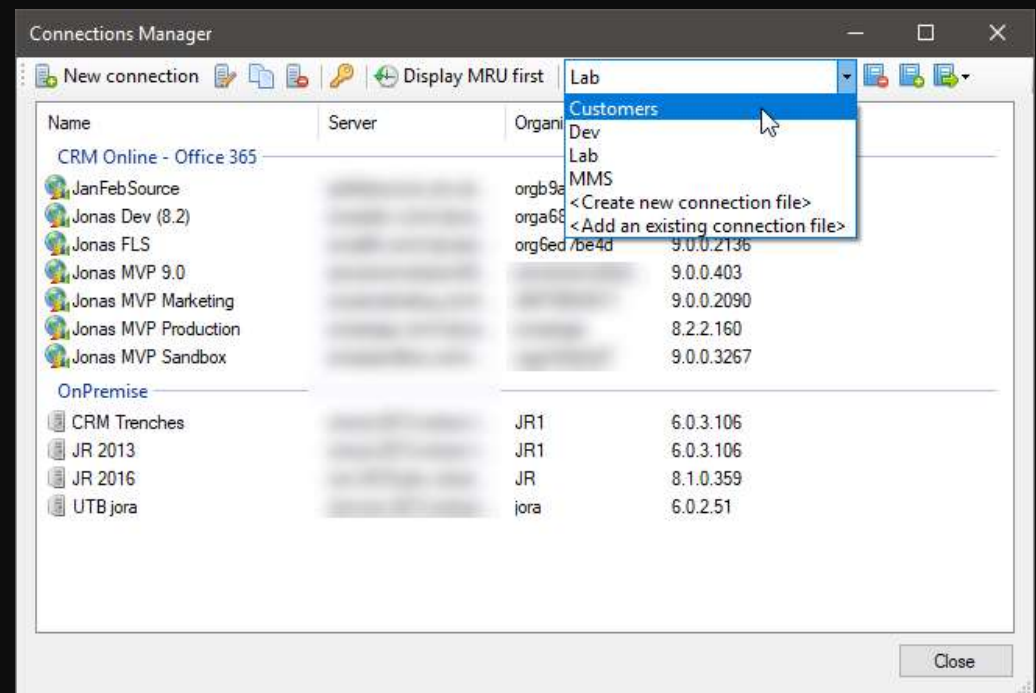
Constant pain

Separate files

Custom storage

Commit to your repo

Store on your [OneDrive](#)



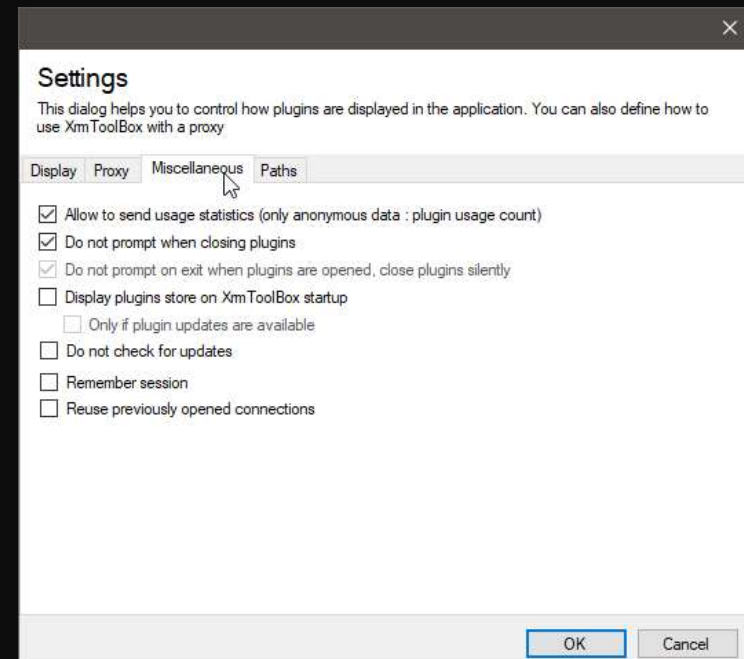
Settings

Sort plugins

Hide plugins

Quit prompting

Find file storage



Updating XrmToolBox

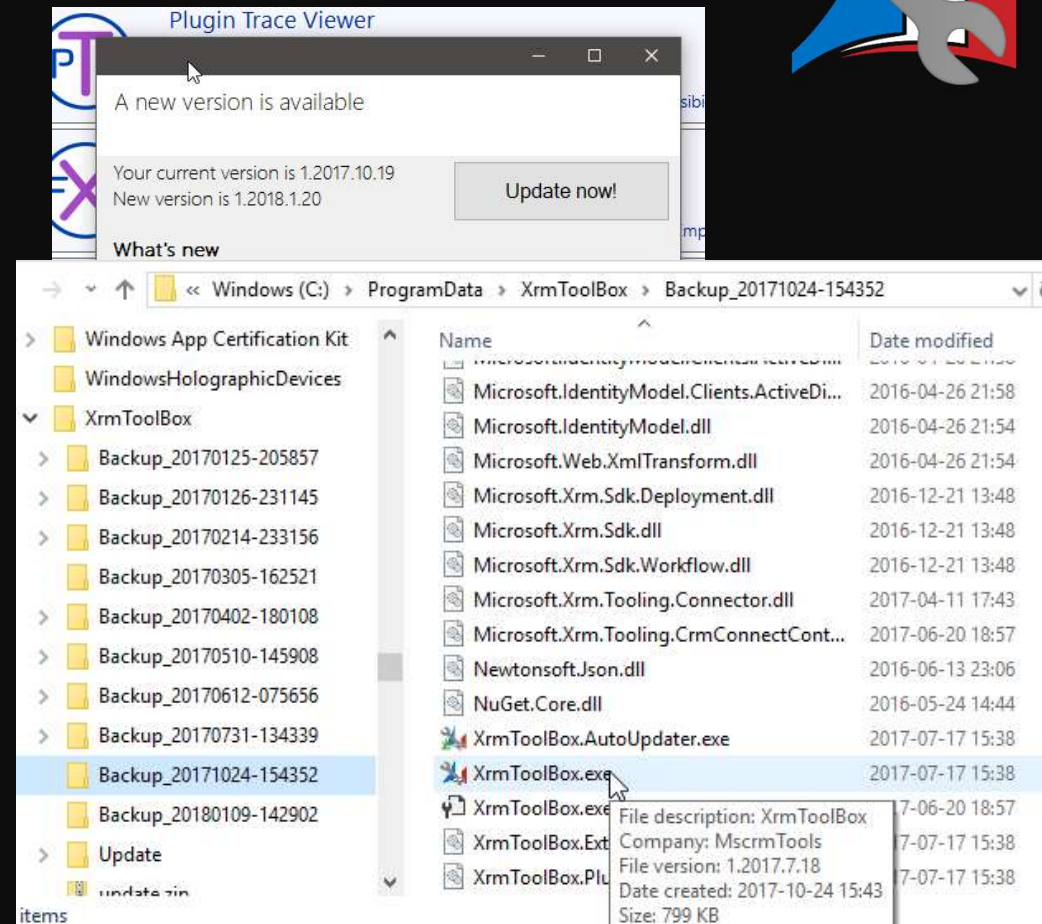
Just say Yes

File conflicts

Connections ~~lost~~ Saved!


Delete plugins


Backup





Latest IS greatest


My favorite XTB tools


**Web Resources Manager** by MscrmTools - 1.2016.12.6


**Solution History** by RajYRaman - 2.2.0.0

**SiteMap Editor** by MscrmTools - 1.2016.12.3

**Plugin Registration** by Microsoft Corporation and contributors - 3.1.1.

**View Layout Replicator** by MscrmTools - 1.2016.9.2

**FetchXML Builder** by Jonas Rapp, Innofactor AB - 1.2016.12.115

**Plugin Trace Viewer** by Jonas Rapp, Innofactor AB - 1.2016.12.20



XrmToolBox for Microsoft Dynamics CRM 2011 to 2016 (v1.2016.11.4)

Connect to CRM | Manage connections | Tabs | Plugins store | Search

Home | View Layout Replicator (Rappen 365)

Entities

Search:

Display name	Logical name
Account	account
Account Project Price List	msdyn_account...
Activity	activitypointer
Actual	msdyn_actual
Actual Data Export (Dep...	msdyn_dataexp...
Address	customeraddress
Advanced Similarity Rule	advancedsimila...
Agreement	msdyn_agreem...
Agreement Booking Date	msdyn_agreem...
Agreement Booking Inc...	msdyn_agreem...
Agreement Booking Pro...	msdyn_agreem...
Agreement Booking Ser...	msdyn_agreem...
Agreement Booking Ser...	msdyn_agreem...
Agreement Booking Set...	msdyn_agreem...
Agreement Business Pr...	msdyn_bpf_ba...
Agreement Invoice Date	msdyn_agreem...
Agreement Invoice Prod...	msdyn_agreem...
Agreement Invoice Setup	msdyn_agreem...
Agreement Sub-Status	msdyn_agreem...
Appointment	appointment
Approval	msdyn_approval
Article	kbarticle
Article Template	kbarticletempla...
Attachment	activitymimeatt...
Batch Job	msdyn_batchjob
Bookable Resource	bookableresou...
Bookable Resource Boo...	bookableresou...

Connected to 'rappen.crm4.dynamics.com (Inn...



XrmToolBox for Microsoft Dynamics CRM 2011 to 2016 (v1.2016.11.4)

Connect to CRM | Manage connections | Tabs | Plugins store | Search

Home

**Easy Translator** by MscrmTools - 1.2016.8.23

**FetchXML Builder** by Jonas Rapp, Innofactor AB - 1.2016.12.115

**Metadata Browser** by MscrmTools - 1.2016.6.1

**Plugin Registration** by Microsoft Corporation and contributors - 3.1.1.

**Plugin Trace Viewer** by Jonas Rapp, Innofactor AB - 1.2016.12.20

**Ribbon Workbench 2016** by Scott Durow - 3.0.24.0

**SiteMap Editor** by MscrmTools - 1.2016.12.3

**Solution History** by RajYRaman - 2.2.0.0

**Web Resources Manager** by MscrmTools - 1.2016.12.6

**View Designer** by Innofactor AB - 1.2016.8.7

**View Layout Replicator** by MscrmTools - 1.2016.9.2

Connected to 'crm-2016-dev.cintutv.se (CEM)'

<http://tiny.cc/XTBstat>

Ribbon Workbench

MVP Scott Durow



Why?

Editing RibbonDiffXml manually is inhumane
Legacy overkill inherited from SharePoint

How?

Graphical UI to layout buttons
Connect buttons to commands
Connect commands to enable- and display rules
Connect commands to actions
Connect actions to js-functions

Remember

One small solution

Auto Number Manager



Why?

Auto Numbers are finally possible to customize
But only through SDK

How?

Identify existing Auto Number attributes
Facilitate creating new and updating existing

Dynamics 365 UI Limitations

Just not possible in IU

Auto Number Manager – Features



Create new Auto Number attributes

Update existing

Change current value

Snippets

Show sample result

Retrieve existing values (using F

The screenshot shows the XrmToolBox for Microsoft Dynamics CRM / 365 CE (v1.2018.1.20) window. The 'Auto Number Manager (Jonas MVP Sandbox)' tab is active. The interface is divided into several sections:

- Target:** Solution is set to 'Default Solution (Default)' and Entity is set to 'Account (account)'.
- Existing Text attributes:** Two radio buttons are present: 'Only show auto number attributes' (unselected) and 'Show all string attributes' (selected). Below is a table listing attributes.
- Auto Numbered attribute:** A form on the right for configuring a new attribute.

DisplayName	Format	LogicalName
Account Number	ACCT-{SEQNUM:5}	accountnumber
Address 1: City		address1_city
Address 1: Country/Region		address1_country
Address 1: County		address1_county
Address 1: Fax		address1_fax
Address 1: Street 1		address1_line1
Address 1: Street 2		address1_line2
Address 1: Street 3		address1_line3
Address 1: Name		address1_name
Address 1: ZIP/Postal Code		address1_postalcode

Auto Numbered attribute configuration:

- Logical Name: accountnumber
- Display Name: Account Number
- Description: Type an ID number or code for the account to quickl
- Maximum Length: 20
- Language Id: 1033
- Number Format: ACCT-{SEQNUM:5}
- Advanced: ☐ Don't require SEQNUM
- Seed: [Empty field] [Guess current]
- Sample number: ACCT-00001
- Format successfully parsed.

Buttons at the bottom: New Attribute, Update, Delete attribute.

Connected to 'jonassandbox.crm4.dynamics.com (Jonas Rapp Sandbox)'

FetchXML Builder



Why?

FetchXML is the query language for Dynamics CRM
Advanced Find is the only “editor”

How?

Represent query in hierarchical UI
Generate corresponding FetchXML

Dynamics 365 UI Limitations

- Not-in queries
- Aggregate queries
- System/internal entities
- Attributes from linked entities
- ...and so on...

FetchXML Builder – Features



Solution to OOB limitations

Join on other fields than relationships

Generate C# QueryExpression code

Generate OData query string

WebAPI coming soon!

Convert to SQL

Easy to use UI to compose queries for reports in CRM

Easy integration with other tools

<http://fxb.xrmtoolbox.com>

[@FetchXMLBuilder](#)

Plugin Trace Viewer



Why?

- Monitor plugin behavior
- Development “debugging”

How?

- Initialize Tracing Service
- Write to trace
- Throw exceptions

Dynamics 365 UI Limitations

- Filtering, Column set, Form design

Plugin Trace Viewer – Features



Filter by almost anything

Retrieve > 250 records

Quick view message / exception

Group / filter by correlation id

Aggregated stats

Identify related traces

Show related Plugin Statistics

Update log setting

<http://ptv.xrmtoolbox.com>
[@PluginTraceView](#)

Non-XrmToolBox Tools

xrm.tools

Microsoft Dynamics 365 Online

Colorado Tech

MVP David Yack

Welcome to Xrm.Tools

Xrm.Tools is a set of tools to make customizing and developing applications with Dynamics 365 easier.

Visual Site Map Editor

Site Map Editor is a visual tool for editing the navigation in Dynamics CRM without requiring any downloads or installations.

[Use Site Map Editor Now!](#)

Business Rules Viewer

Quickly view all the business rules in a CRM Organization without visiting each entity.

[View Rules Now!](#)

Security Role Explorer

Quickly view and compare security roles. This includes the ability to look at the combined roles of a user!

[Explore Roles Now!](#)

Server Trigger Explorer

Quickly explore Business Rules, Workflows and Plugins and the order they execute on the server

[Explore Now!](#)

[Site Map Editor](#)

[Business Rule Viewer](#)

[Security Role Explorer](#)

[Server Trigger Explorer](#)

[Access Tokens](#)

[WebAPI Builder](#)


[Auto Number Creator](#)

xrm.tools

Azure Region Latency

Still in beta

<https://xrm.tools/AzureRegion>



The screenshot shows a web browser window with the URL <https://xrm.tools/>. The page title is "Xrm.Tools". Below the header, a message states: "Best region to use for Azure integration is : West Europe". A table follows, listing various Azure regions and their corresponding latency times in milliseconds.

Region	Time
West Europe	629
North Europe	664
Canada Central	725
India West	879
East US2	978
Canada East	984
India South	984
West US	1010
Brazil South	1097
South Central US	1231
Japan West	1357
Australia East	1576
East Asia	1583
Australia Southeast	1644
Japan East	1649
South East Asia	3747

SDK Download Helper

Still in beta

<http://xrm.tools/SDK>

SDK distributed through NuG

Get the Dynamics 365 SDK Tools

As of Dynamics 365 version 9.x there is no longer a Microsoft provided download for the SDK. The following are options to get

Install Tools via npm

Using npm

Using node package manager you can install and update the SDK Tools on your local machine

npm install -g d365sdktools

Use command **d365sdk-update** to download tools to current directory

Use command **d365sdk-update --dir c:\sdk** to download tools to a specific directory

Rerun the **d365sdk-update** command to update the folder to the latest tools

Download SDK Tools Zip

Download a single Zip File

This zip file contains Core Tools, Plugin Reg, Deployer runtime

[Download SDK Zip File](#)

After you download, you must right-click p file before you unzip it locally

This zip file is updated daily to pickup any c

Use PowerShell to Download

Using PowerShell

Using the script on the following page you can download the tools

[Get PowerShell Script](#)

Manual Download (most work)

Using the manual approach

By visiting each download page, you can do packages, rename to .zip, and then unzip th

Core Tools	i
Configuration Migration Tool	i

CRM REST Builder

Microsoft Dynamics CRM/365

All versions and deployments

MVP Jason Lattimer

CRM REST Builder

{ REST }

CRM Solution

<https://github.com/jlattimer/CRMR>

GUI to compose WebAPI queries

Create Request

Reset

Endpoint

2011 Web API 8.1 Version: 8.1.0.526

Action

Retrieve Single Retrieve Multiple Create Update Delete Associate Disassociate

Retrieve NextLink Predefined Query Action Function

Output Format

XMLHTTP jQuery XrmServiceToolkit SDK.REST SDK.JQUERY XrmSvcToolkit

Formatted Values

Yes No Detect Changes Yes No

Token Header

Yes No Impersonate Yes No

Process

Asynchronous Synchronous

Primary Entity

Account

Id To Retrieve

220FB349-168F-E611-80DD-C4346BACAAC0

Back

Execute Code (Read-Only)

Beware - this will attempt to execute any code in this area!!!

Code (Read-Only)

Results

Code (Editor)

Url

Copy Code

```
1 var req = new XMLHttpRequest();
2 req.open("GET", Xrm.Page.context.getClientUrl() + "/api/data/v8.1/accounts(220FB349-168F-E611-80DD-C4346BACAAC0)?$select=accountid,accountnumber", true);
3 req.setRequestHeader("OData-MaxVersion", "4.0");
4 req.setRequestHeader("OData-Version", "4.0");
5 req.setRequestHeader("Accept", "application/json");
6 req.setRequestHeader("Content-Type", "application/json; charset=utf-8");
7 req.setRequestHeader("Prefer", "odata.include-annotations=\"*\"");
8 req.onreadystatechange = function() {
9     if (this.readyState === 4) {
10         req.onreadystatechange = null;
11         if (this.status === 200) {
12             var result = JSON.parse(this.response);
13             var accountid = result["accountid"];
14             var accountnumber = result["accountnumber"];
15         } else {
16             Xrm.Utility.alertDialog(this.statusText);
17         }
18     }
19 };
20 req.send();
```


Thank You!
Questions?

Find me during Hackathon!

(I've got stickers!)

If you are not working with
XrmToolBox...

...you are just working too hard.

THANK YOU TO THE COMMUNITY SPONSORS!



eBECS
Total Microsoft Business Solutions

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