

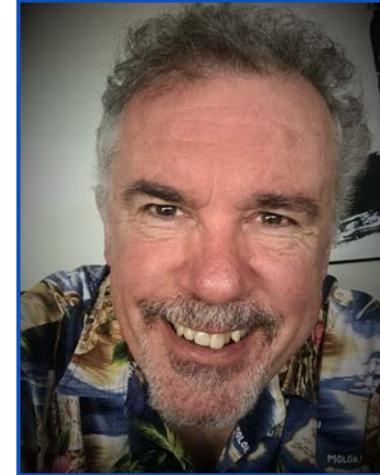


BUILD A CUSTOM APPLICATION TO MANAGE ALL QUERIES

Presented by Stephen Hume, MaxTECH Chair

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Stephen Hume

Stephen has been working with IBM Maximo for over ten years in a variety of industries (Oil and Gas, Utilities). He has taught Maximo courses to end users for both Technical and Functional audiences and chairs the MaxTECH User Group.

Background

The purpose of this new application is an administrative tool to allow an admin user the ability to modify queries which have been created by any users in Maximo. The admin user will be able to set a user query as public or private, modify the SQL, and change the Query Description. The admin user will NOT be able to delete any queries created by another user using this application. (The MBO rules are still enforced).

This application is very useful for managing all queries in all applications in Maximo. It allows the admin user to see where queries have been used on start centers. It allows the admin user to see all queries created by users that may no longer be active in Maximo.

One use case for this tool is that when a user has left the company, the admin user can grant that user access to the query management application, reset the users password, login as that user, go to the query management application and then delete that users queries one at a time. This allows the admin user the ability to keep on top of user queries.

Much of what this application makes possible used to need to be done using backend database updates for query management.

Problem Scenario

Maximo allows users to create queries in applications that can be used on Start Centre Portlets:

- These queries can only be edited by the owner of the query;
- There is no central application to manage all the queries;
- There is no way to clearly see where a query is being used.

Proposed Solution

- Create an application to centrally manage queries
- Clearly show which Start Centers the query is used on
- Allow Maximo Administrators to change the query clause

Out of Scope – Deleting queries owned by another user

Creating the new Application

Information you need before you create the app:

- Name and Description of the new application
- Module where the new application is going to reside

1. Go to Application Designer
2. Insert a New Application Definition
3. Enter the details of your new app
4. The Module Name determines where in the menu your app will reside
5. Click Power App to create your app

Create a New Application

* Application: BPD_QUERY

* Description: Query Manager

* Main Object: QUERY

* Key Attribute: QUERYID

* Module Name: SETUP

Viewport: [dropdown]

Is Mobile?

Select the type of app you wish to create.

Power App Single Page App Self Service App

When adding this application into other environments you can use migration manager to move all changes, or you can replicate the steps manually.

Add Additional Columns

1. We want to be able to search the List Tab for Public Queries
2. From the Control Palette add a new Table Column
3. Open the Control Properties and set the value of the attribute to ISPUBLIC



Table Column Properties

General Advanced

Control ID 1541679376567

Default Label Table Column...

Label Is Public?

Attribute ISPUBLIC

Type

Sortable?

Turn Smart Fill Off?

Show Filter?

Filterable?

Event

Target ID

Event Description

Event Icon

Change Event

CSS Class Name

Adding Related Data

- Display the Owner's Status and Name:
- Go To Database Configuration for the Query Object
- In the Relationships Tab create a relationship to the MAXUSER Object called BPD_OWNER linking the OWNER attribute to the USERID attribute

The screenshot displays a web-based database configuration interface. At the top, there is a navigation bar with tabs for 'List View', 'Object', 'Attributes', 'Indexes', and 'Relationships'. The 'Relationships' tab is active. Below the navigation bar, there is a search bar with 'Object QUERY' and a dropdown menu showing 'The QUERY Table'. A 'Status' field is also visible. The main area shows a table of relationships with the following columns: 'Relationship', 'Child Object', 'Where Clause', and 'Remarks'. A single relationship is listed: 'BPD_OWNER' (Relationship), 'MAXUSER' (Child Object), 'USERID = :OWNER' (Where Clause), and 'Relationship to the MAXUSER table to ic' (Remarks). Below the table, there is a 'Details' section with two columns: 'Relationship' and 'Child Object'. The 'Relationship' column shows 'BPD_OWNER' and 'Where Clause' with a text input field containing 'USERID = :OWNER'. The 'Child Object' column shows 'MAXUSER' and 'Remarks' with a text input field containing 'Relationship to the MAXUSER table to identify the owner details'.

Adding Related Data

Adding the related attributes to the List Tab and the Details Tab:

- Status – BPD_OWNER.STATUS
- Display Name – BPD_OWNER.PERSON.DISPLAYNAME

Making the attributes read only:

- Setting the Input Mode to READONLY ensures that the name/status of the owner can't be altered

The screenshot shows the 'Textbox Properties' dialog box with the 'General' tab selected. The 'Input Mode' dropdown menu is highlighted with a red box. The 'Attribute' field is set to 'BPD_OWNER.STATUS'. Other fields include 'Control ID' (1541683135519), 'Default Label' (Textbox...), 'Label' (Status), 'Hide Label?' (checkbox), 'Turn Smart Fill Off?' (checkbox), 'Data Source ID', 'Lookup', 'Go To Applications', 'Menu Type', 'Size', and 'Icon Menu ID'.

Adding Related Data

Display the Start Centres the Query is used on:

1. Go To Database Configuration for the Query Object
2. In the Relationships Tab create a relationship to the SCTEMPLATE Object called BPD_SCTEMP linking where the CLAUSENAME is in the PRESENTATION

The screenshot displays a web-based database configuration interface. At the top, there are navigation tabs: 'List View', 'Object', 'Attributes', 'Indexes', and 'Relationships'. The 'Relationships' tab is active. Below the tabs, the main area shows a table of relationships. The table has columns for 'Relationship', 'Child Object', 'Where Clause', and 'Remarks'. A single relationship is listed: 'BPD_SCTEMP' (Child Object: 'SCTEMPLATE', Where Clause: 'PRESENTATION like '%||:CLAUSENAME', Remarks: 'Relationship to the start centres that us'). Below the table, there is a 'Details' section with two columns: 'Relationship' and 'Child Object'. The 'Relationship' column shows 'BPD_SCTEMP' and its 'Where Clause' as 'PRESENTATION like '%||:CLAUSENAME|'%. The 'Child Object' column shows 'SCTEMPLATE' and its 'Remarks' as 'Relationship to the start centres that use this query'.

Relationship	Child Object	Where Clause	Remarks
BPD_SCTEMP	SCTEMPLATE	PRESENTATION like '% :CLAUSENAME	Relationship to the start centres that us

Details

Relationship BPD_SCTEMP Where Clause PRESENTATION like '% :CLAUSENAME '%	Child Object SCTEMPLATE Remarks Relationship to the start centres that use this query
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Adding Related Data

Add a new table to the Main tab on your new App:

1. Relationship – BPD_SCTEMP
2. Label – Start Centres
3. Input Mode – Read Only
4. Add Table Columns for:
 - NAME
 - DESCRIPTION

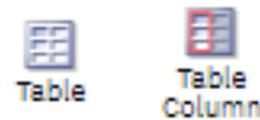
A screenshot of a table component in a design tool. The table has a title 'Start Centres' and a 'Filter' button. The table body contains two columns, both labeled 'Table Column...'. The first cell in the first row is highlighted with a red border and contains the text 'Invalid'. The second cell in the first row is also highlighted with a red border and contains the text 'Invalid'.

Table Column...	Table Column...
Invalid	Invalid

A screenshot of the 'Table Properties' dialog box. The 'General' tab is selected. The 'Advanced' tab is also visible. The 'Control ID' is 1541760963318. The 'Label' is 'Start Centres'. The 'Input Mode' is 'ReadOnly'. The 'Select Mode' is empty. The 'Bean Class' is empty. The 'Order By' is empty. The 'Data Source ID' is 1541760963318. The 'Business Object' is empty. The 'Parent Data Source ID' is empty. The 'Relationship' is 'BPD_SCTEMP'. The 'Width' is empty. The 'Description' is empty. The 'Title Attributes' is empty. The 'Start Empty?' checkbox is unchecked. The 'Filterable?' checkbox is checked.

Table Properties

General Advanced

Control ID 1541760963318

Label Start Centres

Input Mode ReadOnly

Select Mode

Bean Class

Order By

Data Source ID 1541760963318

Business Object

Parent Data Source ID

Relationship BPD_SCTEMP

Width

Description

Title Attributes

Start Empty?

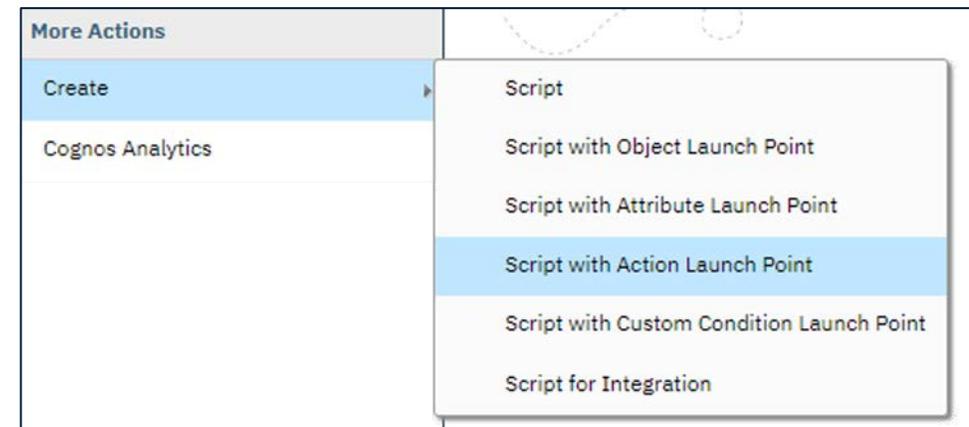
Filterable?

Creating an Automation Script

We need a script to unlock the read only fields:

- CLAUSE
- DESCRIPTION
- ISPUBLIC

1. Go to Automation Scripts and Create a Script with an Action Launch Point



* Launch Point	<u>BPD_QUERY</u>	<u>BPD - Unlock Query Fields</u>	Object <u>QUERY</u>	
Action	<u>BPD_QUERY</u>	<u>BPD - Unlock Query Fields</u>	Active?	<input checked="" type="checkbox"/>

Creating an Automation Script

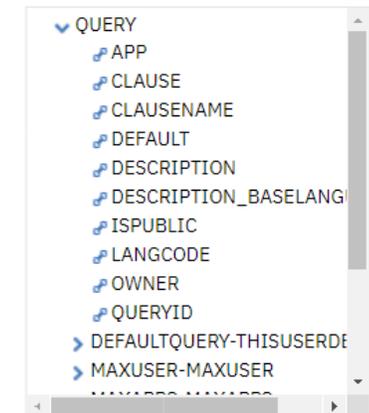
Add Variables for:

- clause
- description
- ispublic

1. Bind them to the corresponding fields on the QUERY object

Variable	Variable Type	Binding Type
> clause	INOUT	ATTRIBUTE
> description	INOUT	ATTRIBUTE
> ispublic	INOUT	ATTRIBUTE

Select Fields



Creating an Automation Script

Create the Script with the code:

```
description_readonly = False  
clause_readonly = False  
ispublic_readonly = False
```

Create Script with Action Launch Point : Step 3 of 3

i You can enter a script in the Source Code field, or you can import a script file in the previous step.

Launch Point BPD_QUERY BPD - Unlock Query Fields Object QUERY

Script BPD_QUERY BPD - Unlock Query Fields

Source Code `description_readonly = False
clause_readonly = False
ispublic_readonly = False`

Cancel Previous Create

Link the Action to the App

1. Open Application Designer for your app
2. Select Action > Add/Modify Signature Options
3. Add a new row with the same Option Name as your new Action
4. Select “This is an action that must be invoked by user in the UI”

Add/Modify Signature Options

Option	Description
BPD_QUERY	A Sigoption to unlock fields

Option
BPD_QUERY

Description
A Sigoption to unlock fields

Option Also Grants

Option Also Revokes

Prerequisite

E-signature Enabled?

Visible?

New Row

Advanced Signature Options

None
 Warning appears when this action is selected from List page where multiple records are shown and no particular record is selected
 This is an action that must be invoked by user in the UI
 Associate to launch entry to enable launch in context

Launch Entry Name

Link the Signature Option to a Button

1. Add a new Button Group from the Control Palette
2. Open the Control Properties for the button
3. Set the Label to Unlock
4. Set the Event to BPD_QUERY
5. Grant your user the Signature Option in Security Groups app
6. Sign out and back in for it to take effect



Pushbutton Properties

General Advanced

Control ID 15422943626762

Label Unlock

Event BPD_QUERY

Target ID _____

Value _____

Default Button?

Menu Type NONE

Testing the Application

1. Go to the Query Manager Application
2. Open a query owned by someone else
3. Click [Unlock] to see if the fields become editable

The screenshot shows the Query Manager application interface. The top navigation bar includes a home icon, a menu icon, the text 'Query Manager', the user name 'Mike Wilson', and several utility icons. Below the navigation bar, there are tabs for 'Query' and 'Find Owner', and a 'Select Action' dropdown menu. The main content area displays query details for 'SUPERVISORTEAM' in the 'PERSON' application, owned by 'MAXADMIN'. The 'Clause' field contains a complex SQL query. A blue 'Unlock' button is located at the bottom right of the query details section.

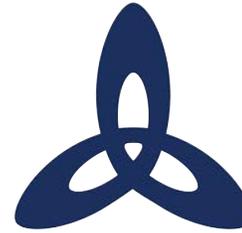
UNLOCK

This screenshot shows the same Query Manager application interface as the previous one, but with the 'Public?' checkbox checked. The 'Clause' field now contains the same SQL query as before, but with some words highlighted in red: 'personid=USER', 'personid NOT IN (:USER)', 'synonymdomain', 'domainid=PERSONSTATUS', and 'maxvalue=ACTIVE'. The 'Unlock' button is still present at the bottom right.

THANK YOU!

Success! You have learned the following skills through this training class:

- How to create a new custom application against an existing Maximo Object
- How to create relationships and use those relationships to display data from related tables
- How to create a table of related data in an application
- How to add new signature options
- How to create an action triggered automation script
- How to add a pushbutton to an application to trigger an action
- How to give access to the pushbutton through security



Ask us a technical question:

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MaxTECH is the first ever dedicated Maximo Technical User Group aimed at Maximo Administrators, Developers and Technical Support staff.

It is a great place for users to ask and answer technical questions, learn from each other, collaborate and help improve Maximo in your organization.

MaxTECH was founded in 2017 by BPD Zenith and is chaired by Maximo Consultant Stephen Hume. We host several events every year (Calgary, St. Louis, MaximoWorld, Houston, MUWG, Northern California MUG, Maximo UK & Ireland User Group) including digital events.

MaxTEACH is a free online user group designed to go in depth into a Maximo topic.