Agile Labs

Axpert Web

RELEASE NOTES

FEBRUARY 2023

Table of Contents

Chapter 1. What's New in 11.2.1

Note for upgrade

When you are upgrading from a lower version using the installer, the following changes need to be implemented in web.config file

- Open web.config file from the root directory of Axpert. This is the folder where Axpert dot net is installed.
- While upgrading through installer the code snippet shown below, gets moved to the end of the file. This might result in an internal server error.

```
<configSections>
<section name="botDetect" requirePermission="false"
type="BotDetect.Configuration.BotDetectConfigurationSection, BotDetect" />
</configSections>
```

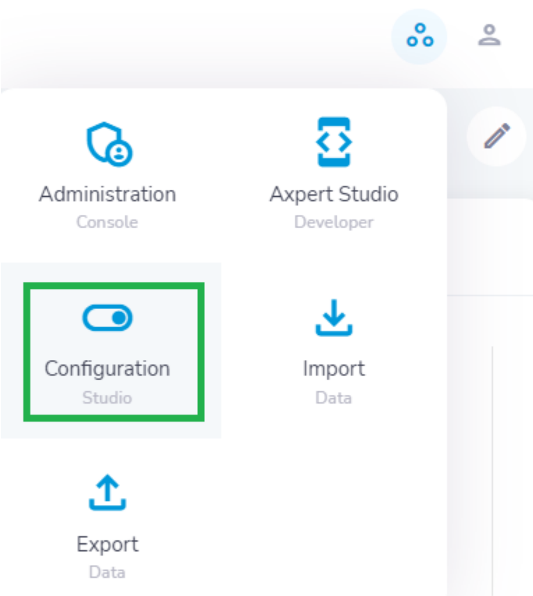
- To avoid this error, move the code snippet as the first element under the configuration section. For example

```
<?xml version="1.0" encoding=" utf-8"?>
<configuration>
        <configSections>
        <section name="botDetect" requirePermission="false"
        type="BotDetect.Configuration.BotDetectConfigurationSection, BotDetect" />
        </configSections>
```

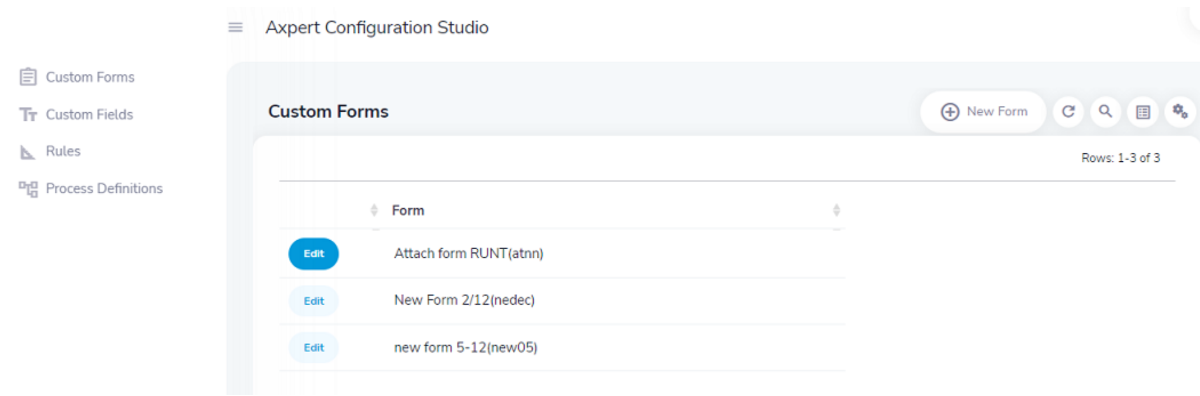
Features & Enhancements

Axpert Configuration Studio for runtime

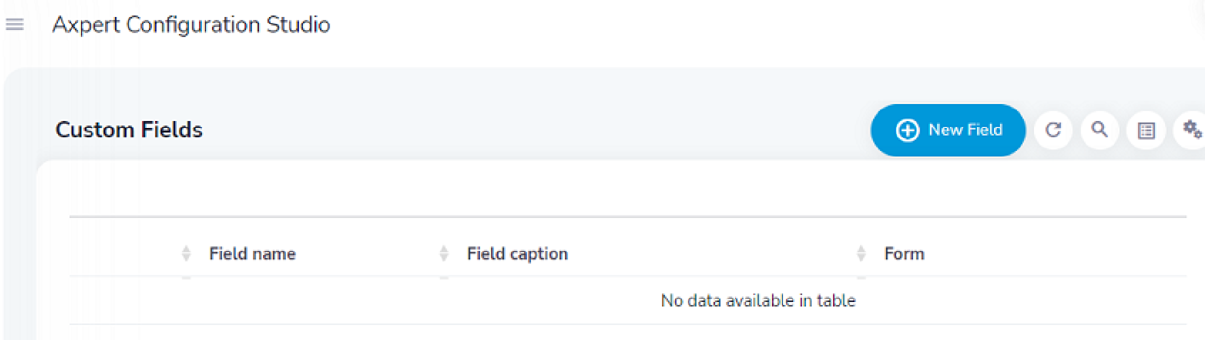
A new page for configuring forms/tstructs has been introduced on the run site. This can be found under options as shown



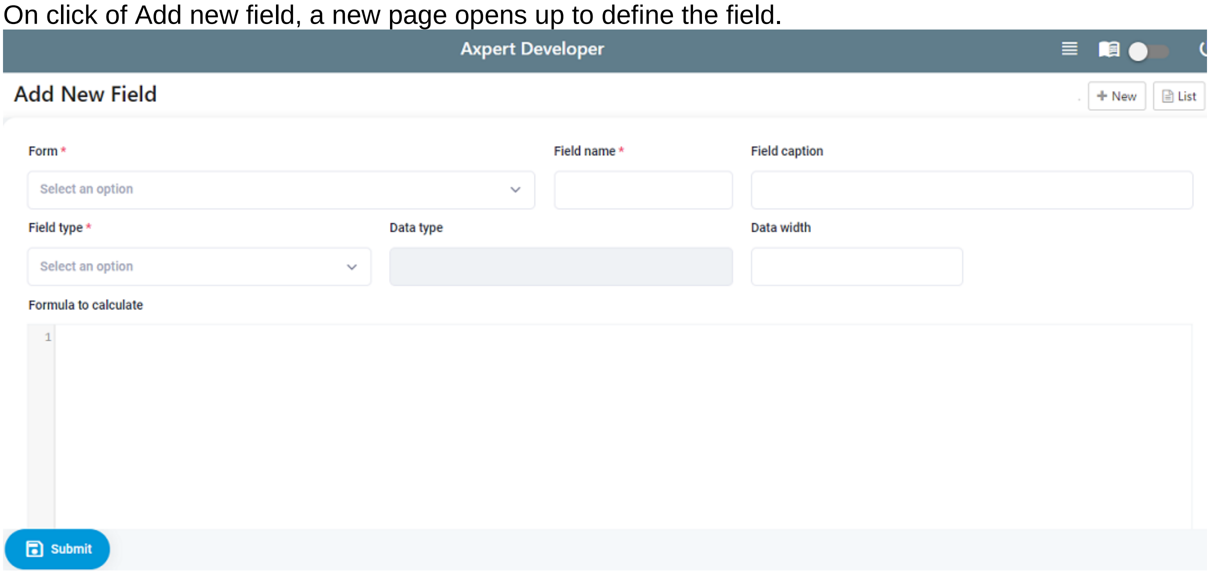
This will open a page with options to customize forms, fields, rules and process definitions. You can create a new form or edit an existing form.



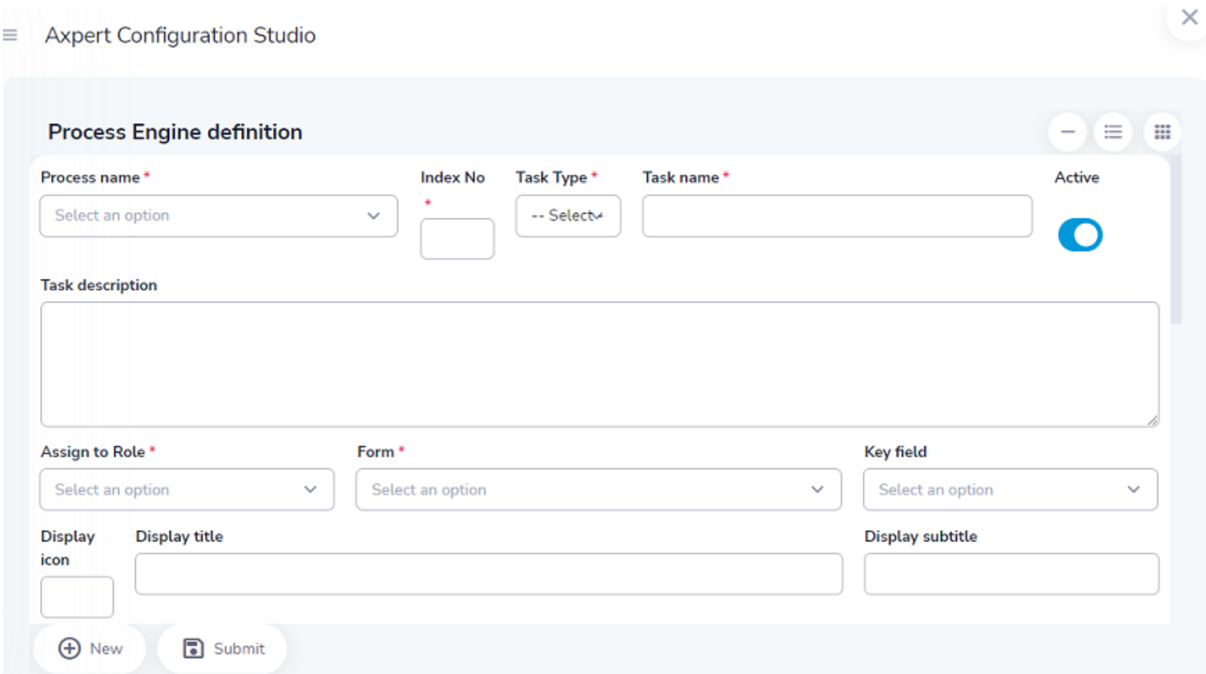
Customize fields with Custom field option. Add or modify the existing field as per the requirement.



On click of Add new field, a new page opens up to define the field.



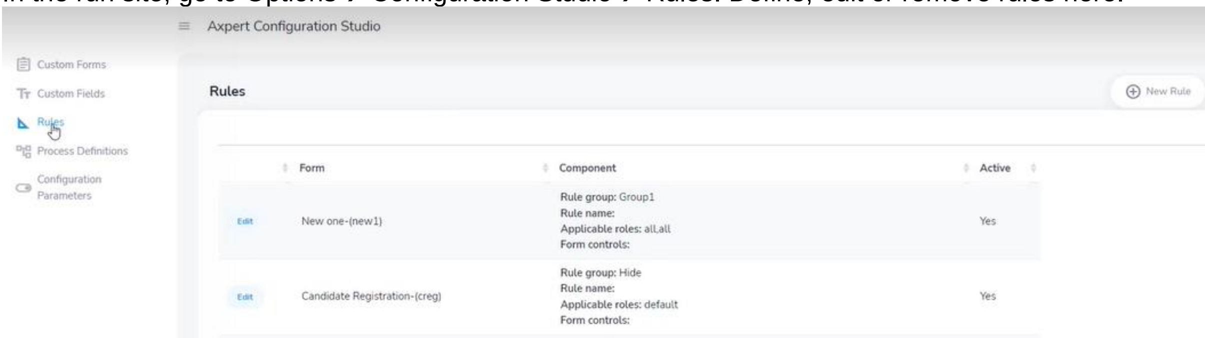
Define Process definitions and execute them with this option.



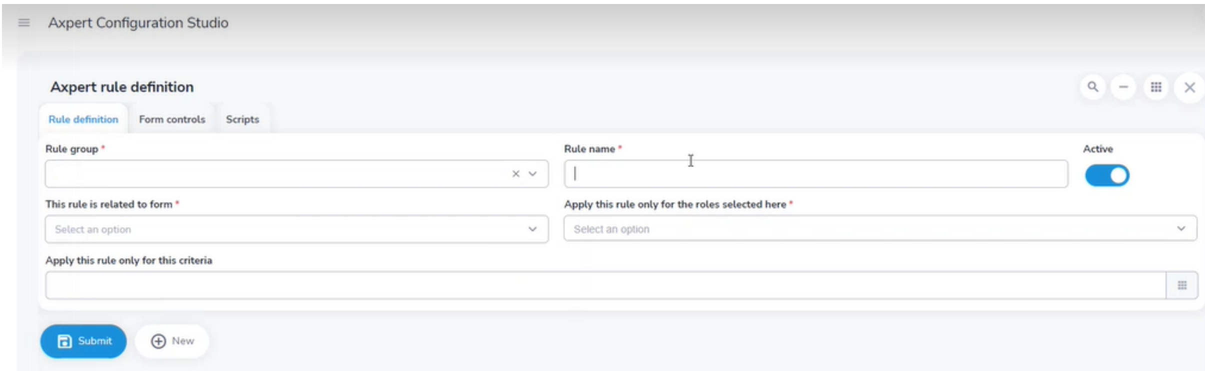
Axpert Rules

In Axpert we can define rule during the field creation in a form. But when we are hosting an application on cloud server, it will be used by multiple customers. Based on customer requirement we can enable the rules. The users can set their own logic to the forms using Axpert rules option.

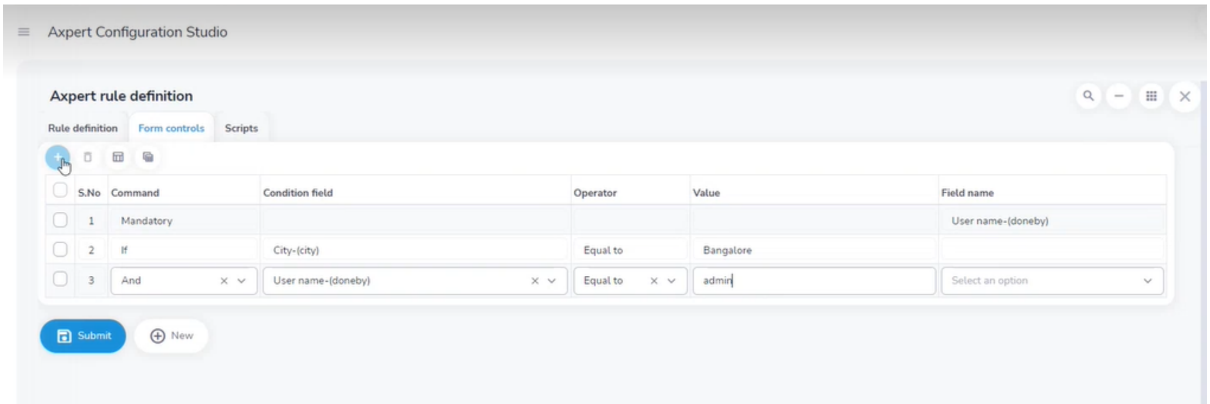
In the run site, go to Options→ Configuration Studio→ Rules. Define, edit or remove rules here.



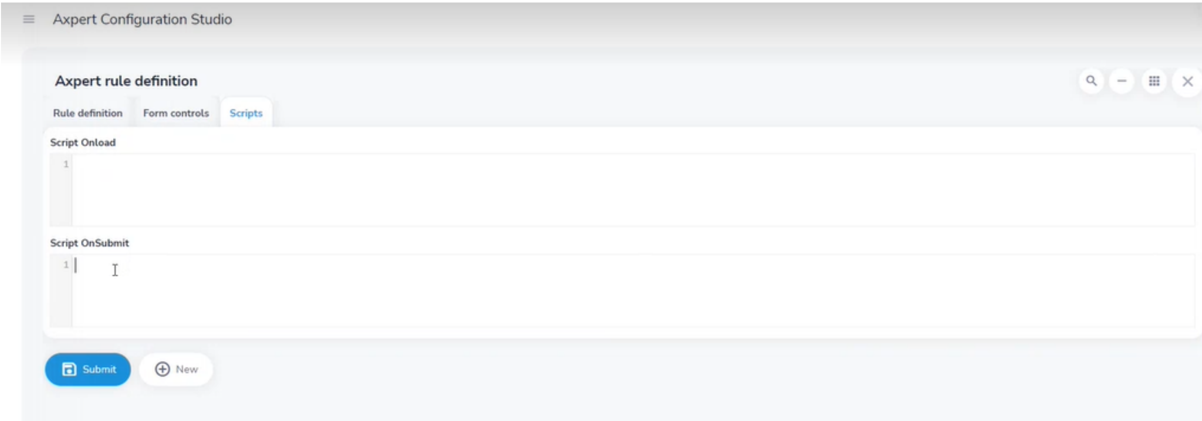
Click on New Rule to define new and click on submit.



User can define multiple rules for a form. It also provides form control option as shown

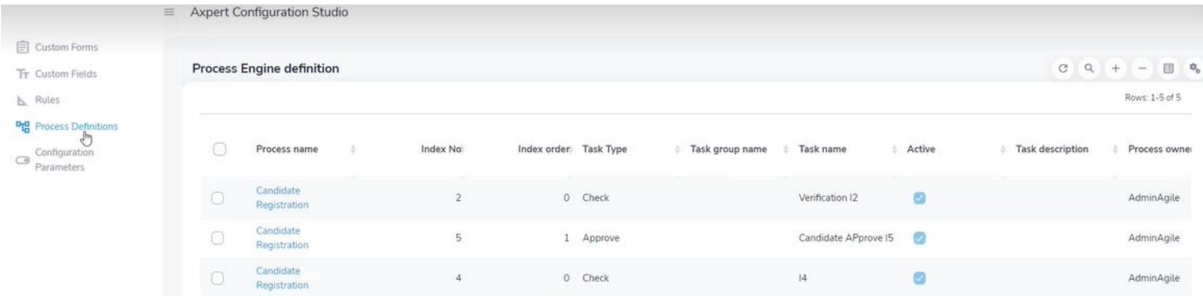


User can also define scripts using the rules option.

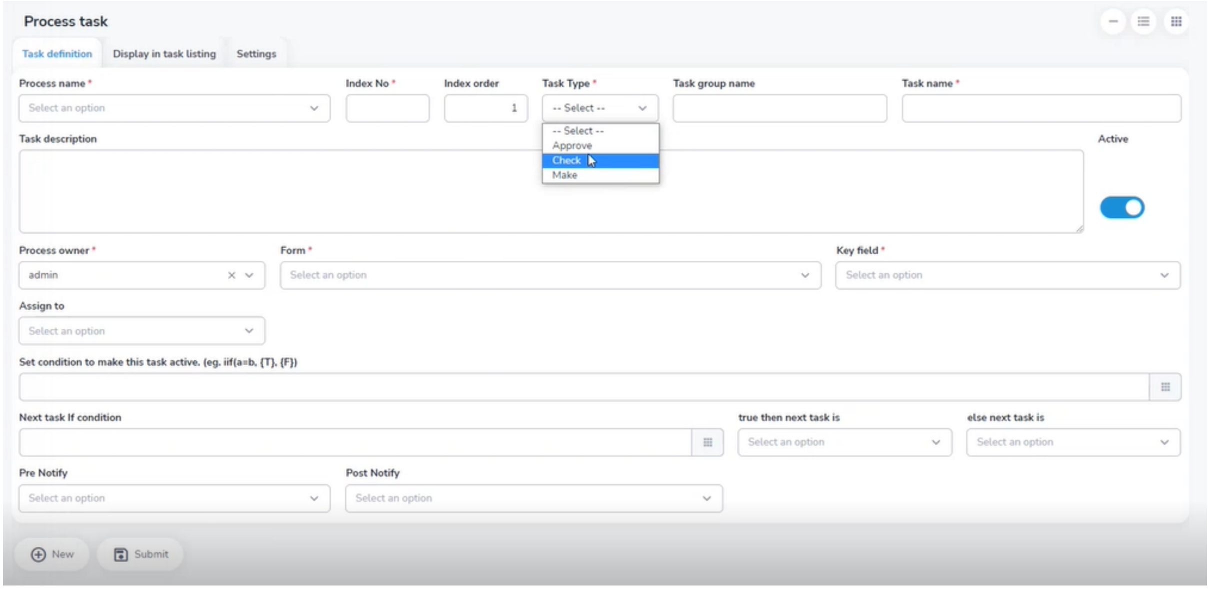


Introducing Process Execution Engine (PEG)

Process definitions are introduced to help create one process by linking N number of forms on Axpert. To define a process, go to Options→Configuration studio→Process Definition



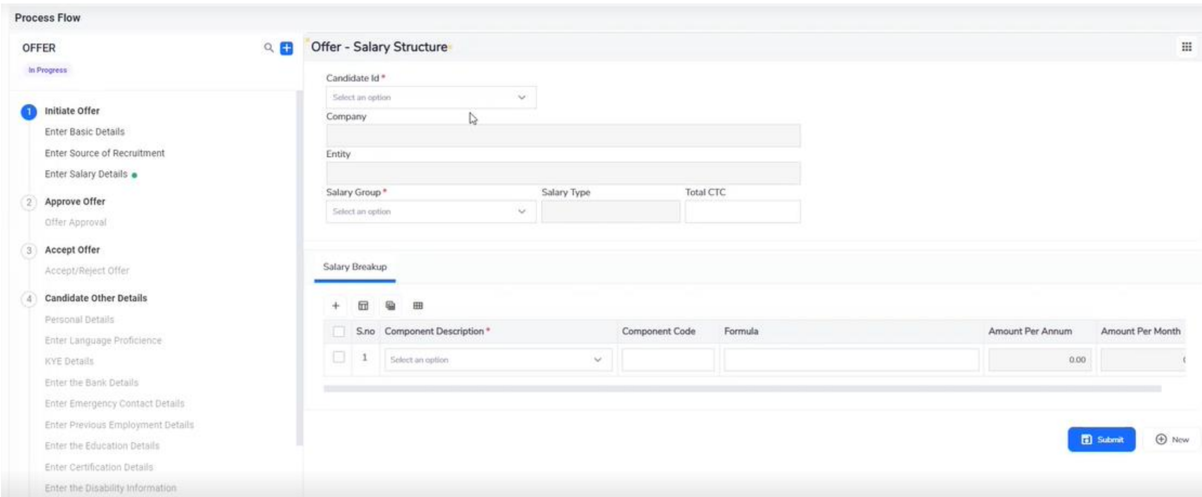
To create a new process, click on + on the top right.



Process has three task types

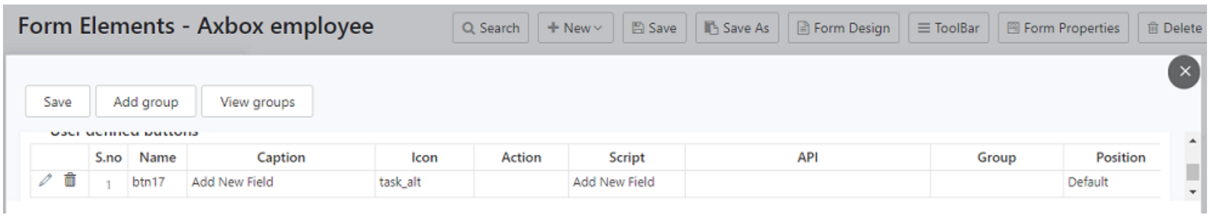
- Make – Creating a form and initiating PEG. This helps in attaching a process to the form
- Check – Validate the data
- Approve – Reject or approve the request

The process flow will look as shown below

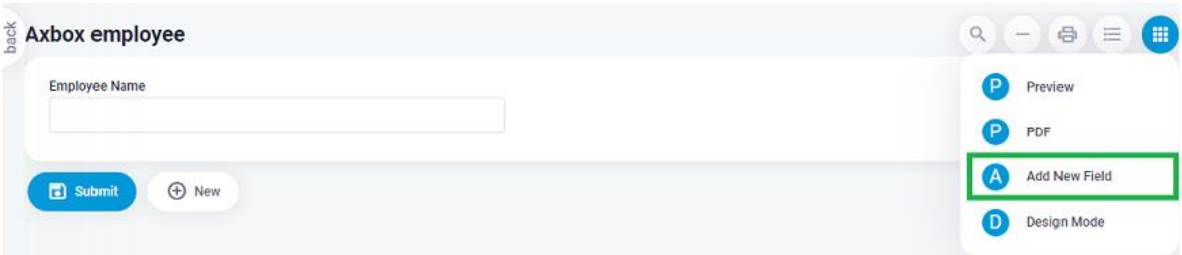


Add and Remove fields in the existing form on the run site

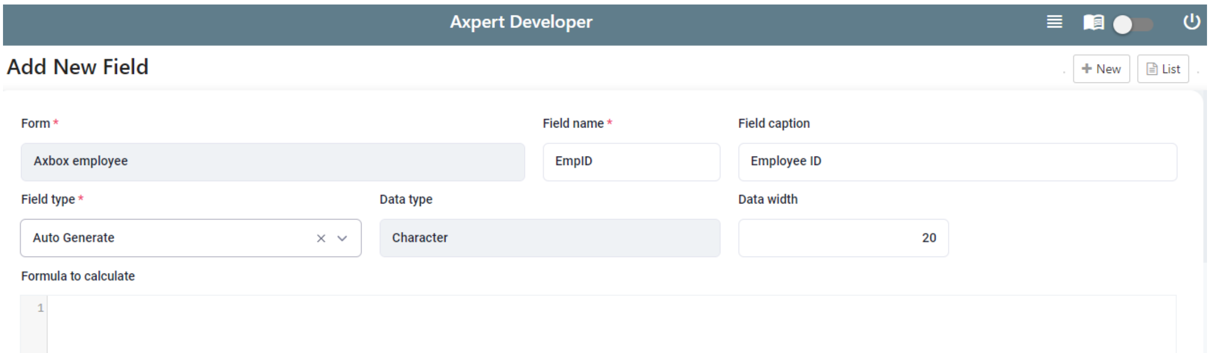
A new feature has been introduced to add and remove fields in the existing form.
To enable this feature, introduce a user defined button in the form with “Add new field” script in the form on developer site. Define a Script in Dev site as shown.



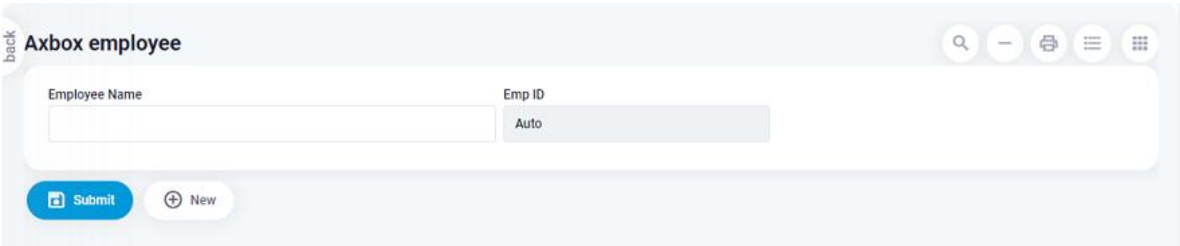
Go to run site and open the form where the button was created. You will now be able to create a new field by clicking on this button.



An axpert developer screen to add new field appears.

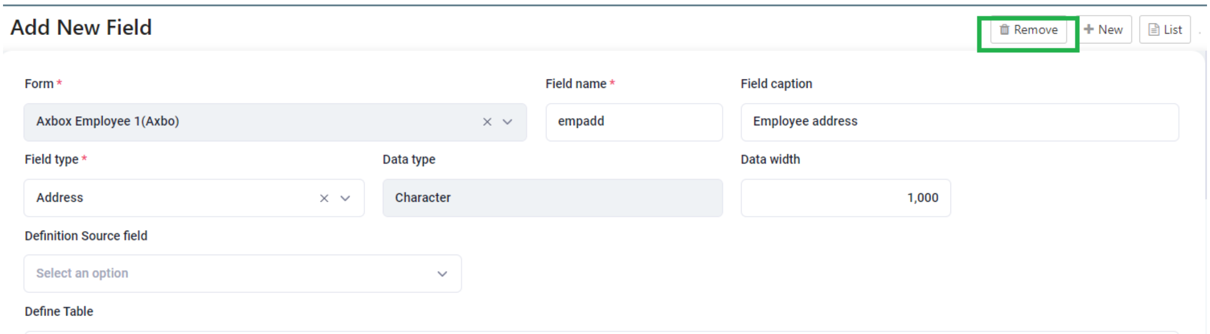


Insert the necessary details and submit. Go to the run site and refresh the form.



Remove fields from the form in run site

Go to the axpert developer page opened, where the field was created and click on remove button on top right

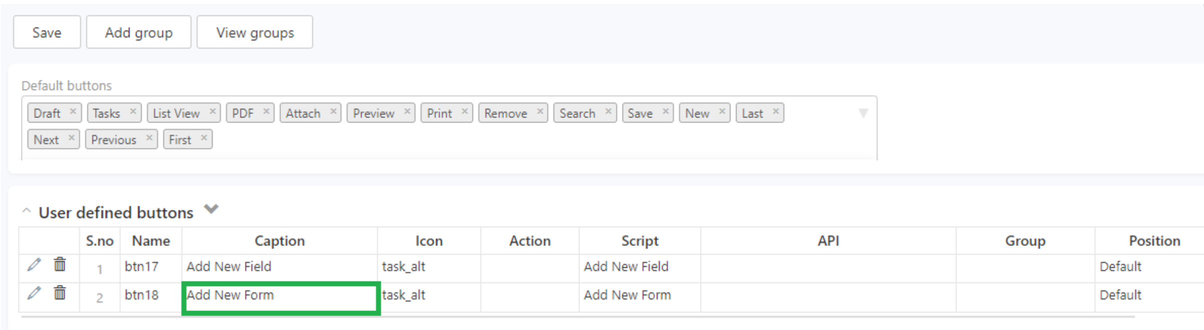


A pop up appears, click on confirm to delete the field from the form.

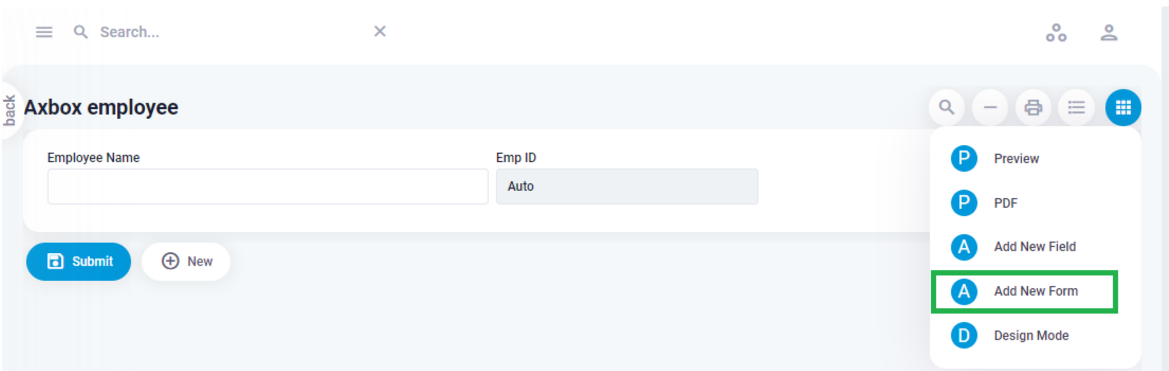
Visit the run site and reload the tstruct to see the field removed.

Add and Remove Form with button click on the run site

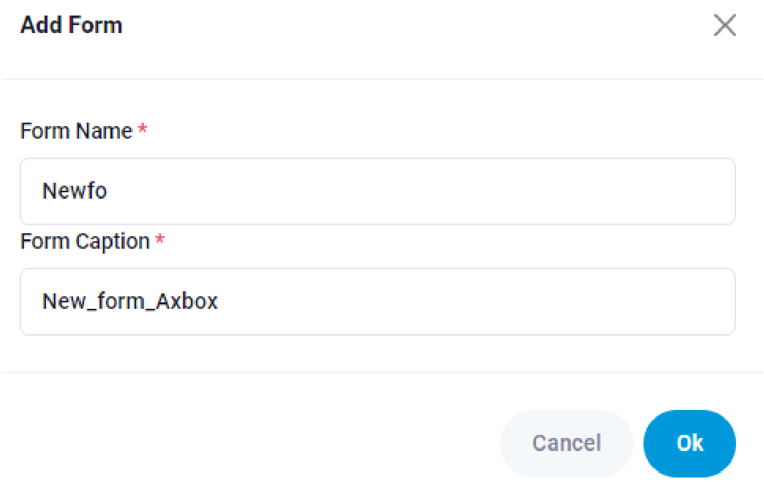
A new feature has been introduced to add a form using button click.
To enable this feature, introduce a user defined button in any form with "Add new form" script. Define a Script in Dev site as shown.



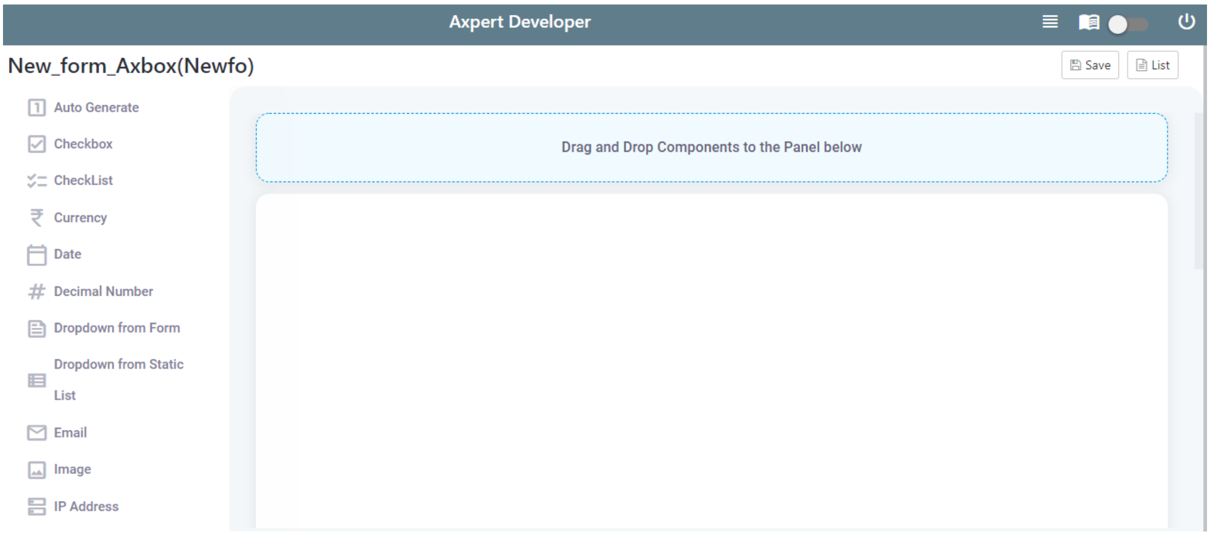
Click on the new button created in the run time as shown



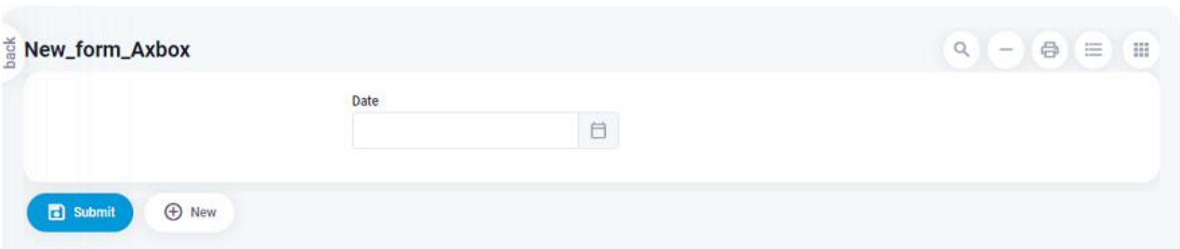
This will open up a tab, give the new form name and caption and click on OK



A new form screen appears, where you can drag and drop fields as desired.

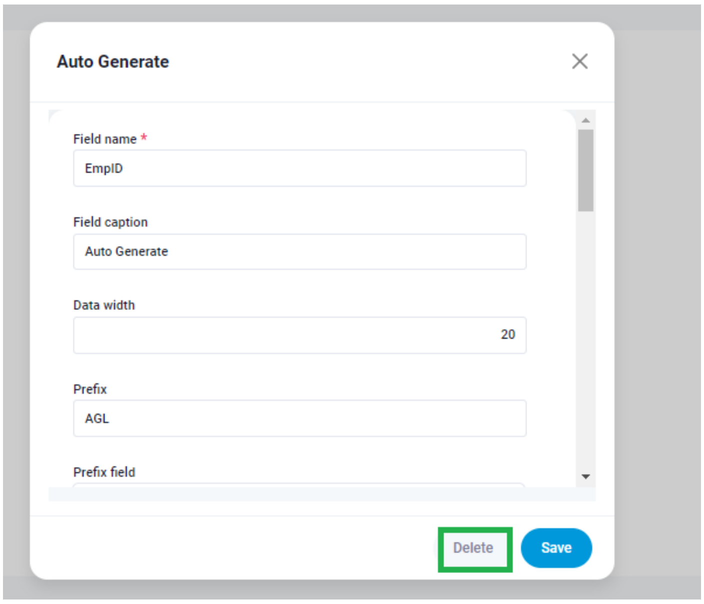


A new form is created and is available on run and dev site



Remove Field from a created form on Runtime

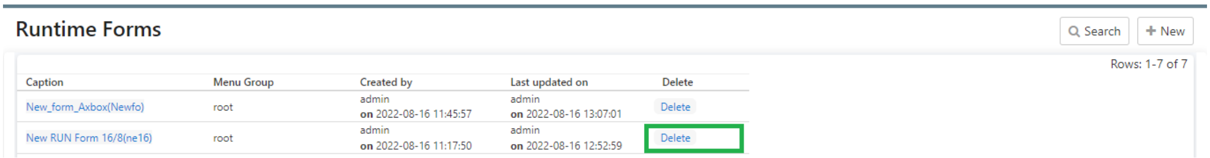
To delete a field in the new form, click on the edit button on top of the field and click on the delete button at the bottom of the pop up.



Remove Form from run site

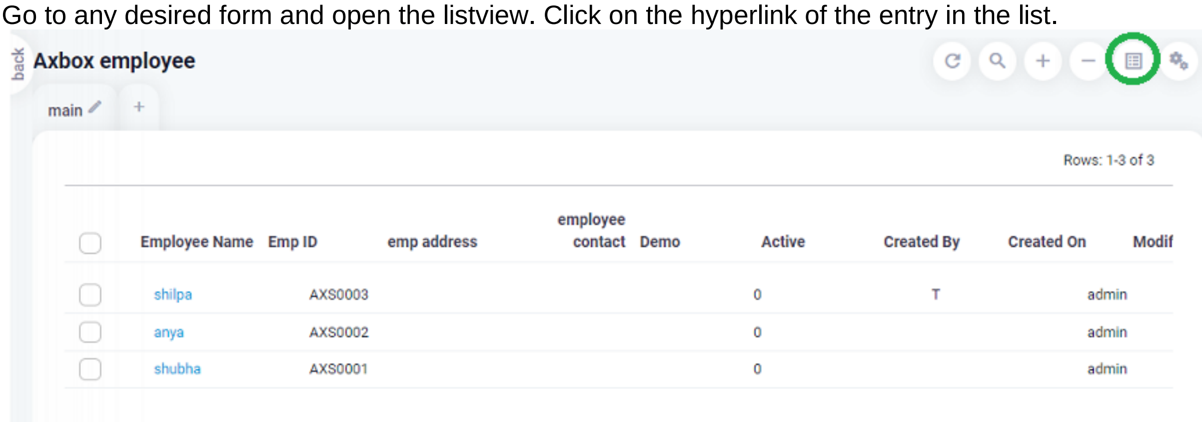
In the developer page pop up of the newly created form, go to list option on the top right

Click on delete of the form you would like to delete.

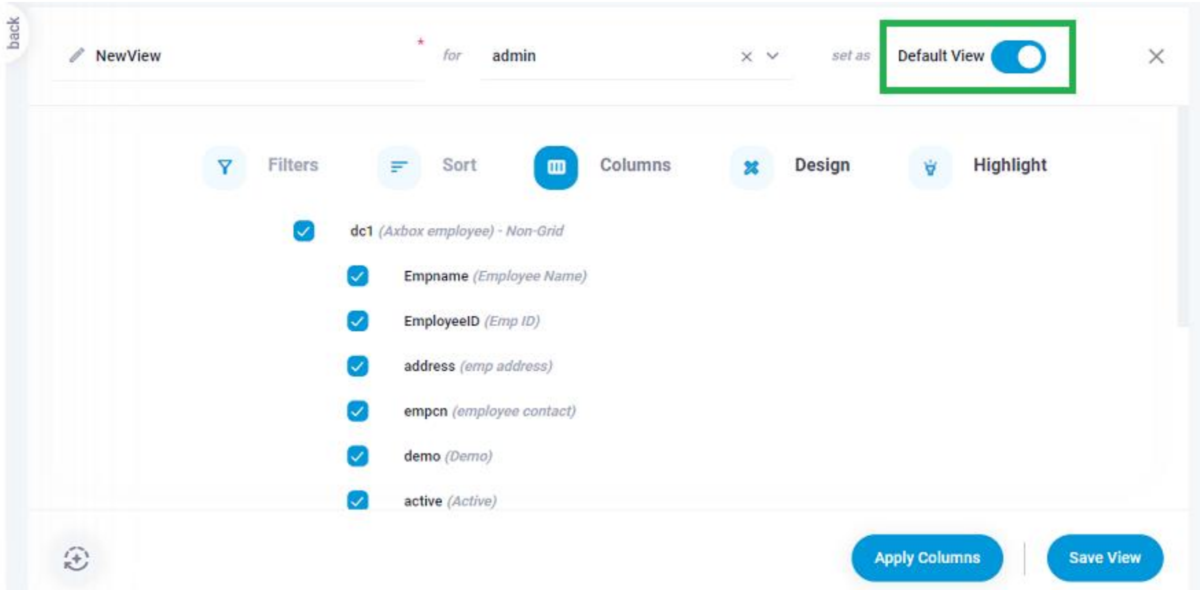


Toggle for Set Defult view introduced from List View

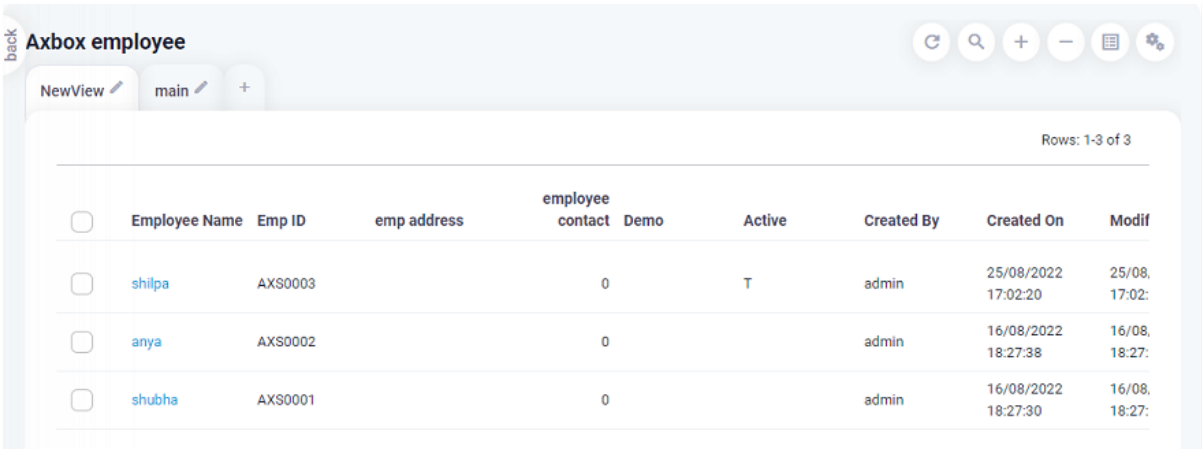
Go to any desired form and open the listview. Click on the hyperlink of the entry in the list.



Click on Add View and enter name for the view, make desired changes in filters, columns and set the default view using the toggle button. Apply filters and Save the view.

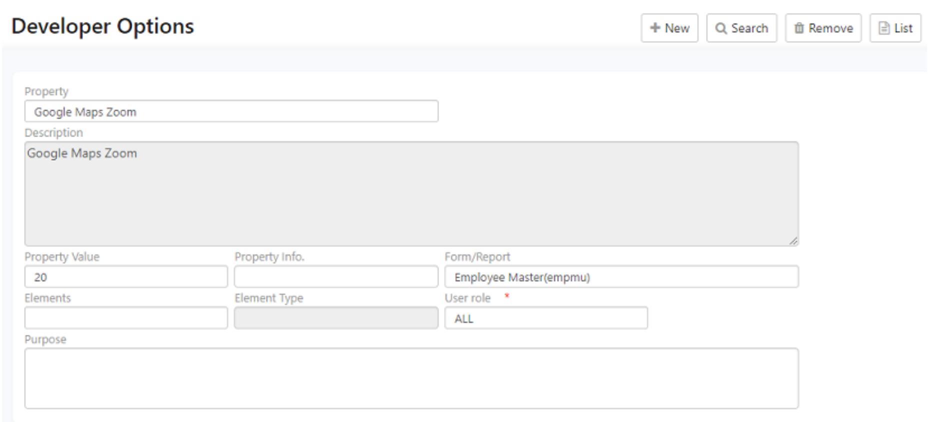


A New view with the given name appears as default as shown

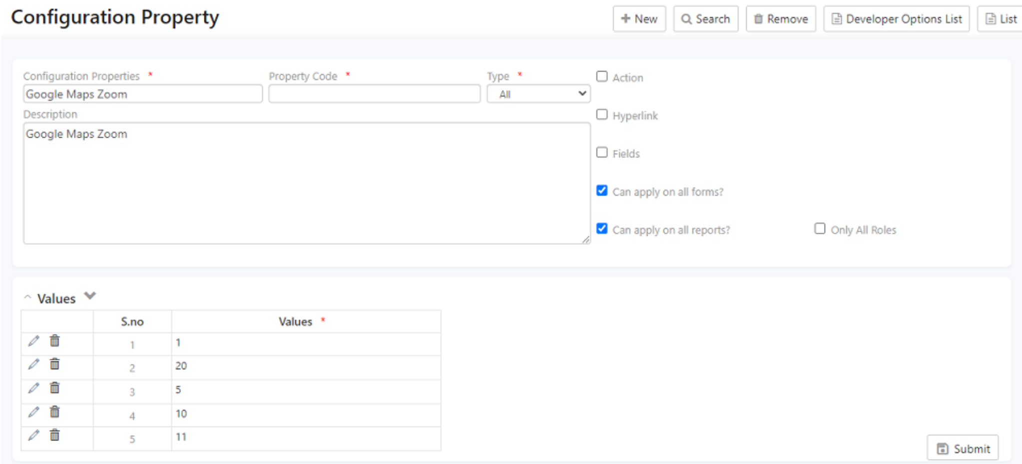


Zoom in using google map to cover nearby areas

Google map has to be zoomed in when located. It should show nearby areas.
In Advanced settings create a google maps zoom key.

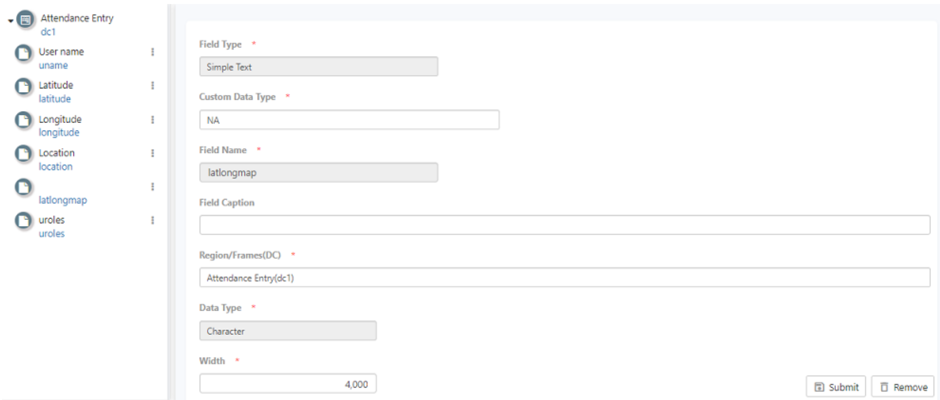


Configure it with appropriate values



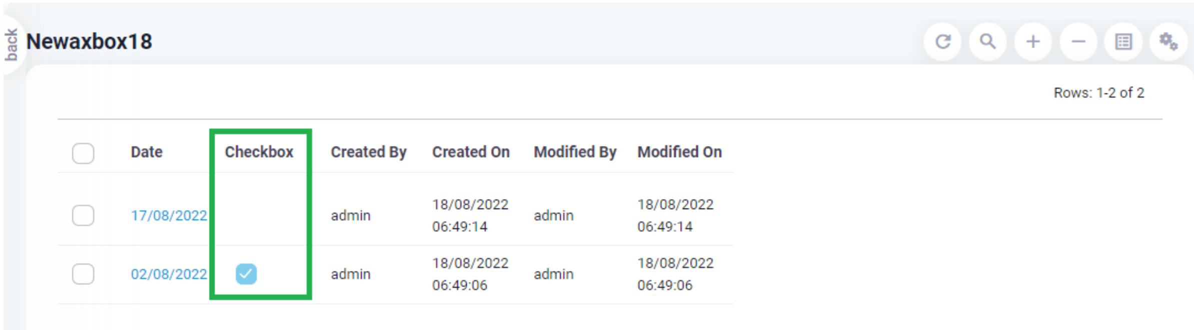
Configuration: “Google Maps Zoom”
Key: “Google Maps Zoom”
Property Code: “Google Maps Zoom”
Value: 1 – 22:
1: World
5: Landmass/continent
10: City
11: Default
15: Streets
20: Buildings
Description: Use this key to set the zoom level in google maps for particular / all tstruct

In the form define a field named latlongmap that will display the map on the run time. Set the field width to 4000.



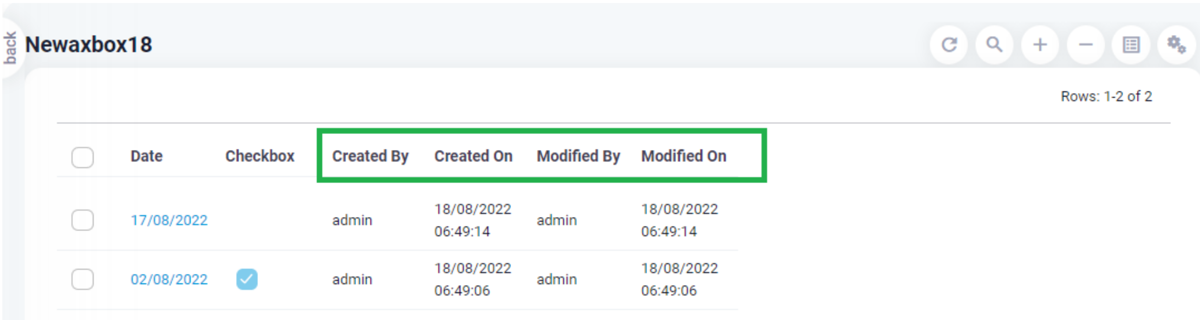
In the run time, the map is displayed as shown

Check Box component to be displayed in the List View



	Date	Checkbox	Created By	Created On	Modified By	Modified On
	17/08/2022		admin	18/08/2022 06:49:14	admin	18/08/2022 06:49:14
	02/08/2022	✓	admin	18/08/2022 06:49:06	admin	18/08/2022 06:49:06

Created on, created by, modified on, modified by introduced as part of listview columns



	Date	Checkbox	Created By	Created On	Modified By	Modified On
	17/08/2022		admin	18/08/2022 06:49:14	admin	18/08/2022 06:49:14
	02/08/2022	✓	admin	18/08/2022 06:49:06	admin	18/08/2022 06:49:06

Validation error messages based on language selected during login

A new feature introduced to show the validation error messages based on logged in language by using error codes.

- Error codes definition structure added in Admin console.
- Using this Definition structures users can add the error codes and error messages for different languages which can be used 1 or multiple forms at application level
- All Error codes should start with '#' character.
  Example:

- Suppose an error code added as -- Error code: #1001, Error Message: Field values should not be same.
- Suppose Validation Expression added as: IIF (fldA#fldB,{T},{#1001})
- When user enter the data same in fldA and fldB then error message will pop up as 'Field values should not be same'

UI SCSS Custom Hook file along with Bootstrap 5 SCSS compiler

Additional SCSS imports to be referred in following empty "_custom.scss" partial file available in "\UI\compiler\src\sass" directory
Example Imports:
@import "examplestyles";
Any Variables / Methods / Mixins available in bootstrap 5 can be used here
Compilation can be triggered by pressing the "F5" key in Visual Studio Code Editor.
Note: Make sure "npm install" is completed.

Easy signin template based on projects

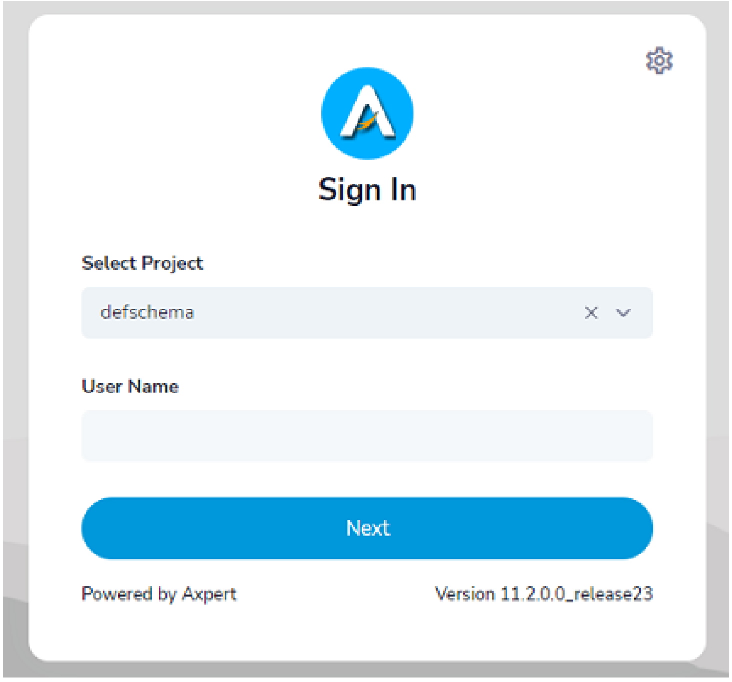
Configuration:

- Create HTML page in CustomPages directory with name as {{connectionName/projectName}}.html
  Example 1: projectName.html
- In web.config enable "landingPageHTML" configuration by setting value as "true"
- The custom html should be wrapped around in following code:
  <template class="templateAgContent"> … </template>
- HTML Should compulsorily have "axCustomLoginControl" class to custom linked controls along with "data-id" attribute with value as REAL FIELD id as below
  List of Important Controls:
  - Username Control: axUserName
  - Passwsord Control: axPassword
  - Remember Me Control: signedin
  - Submit Button: btnSubmit
  - Forgot Password Link: lblForgot
    Example:
  - <input class="axCustomLoginControl" data-id="axUserName" type="text" name="Username" />
  - <input class="axCustomLoginControl" data-id="axPassword" type="password" name="Password" />
  - <input class="axCustomLoginControl" data-id="signedin" type="checkbox" />
  - <button class="axCustomLoginControl" data-id="btnSubmit" href="#">LOG IN</button />
  - Lost your Password?
- To open the SignIn page for the required project open the website with first URL parameter as {{connectionName/projectName}}

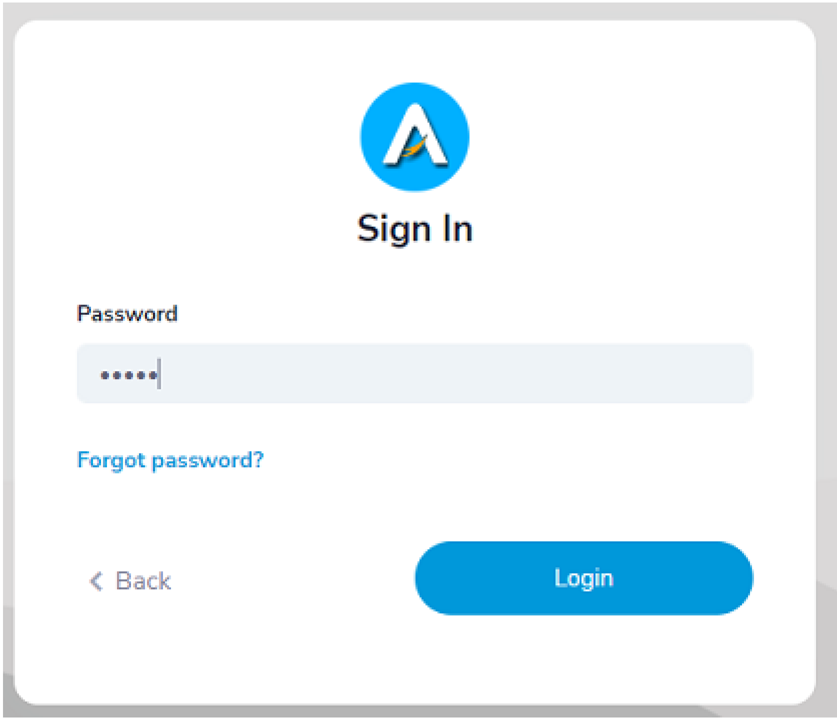
Example: https://agilecloud.biz/run/aspx/signin.aspx?projectName
Note: Custom Html in Signin page will not have Background Image and Project Logo set in Configuration Page, this has to be handled in this custom signIn page template itself.

Separate Sign In page to accept username and password

During Sign in on the application, the page is enhanced to accept schema name and user name



Click on Next, then enter the password and click on Login. This is introduced considering the security aspects of authentication.



Internal SSO key creation and automatic login

Enable an API to validate the user id in the application with a pair of client / secret key and exchange access token along with once (one-time random key)
Provide a redirect page with the token & nonce, where need to implement a logic to validate and establish login.

Note:

- A web method is introduced as below with accepting project name, which can be called on Hyperlink/Button click.
  Ex.: getInternalSSOToken(_thisProj)
- This web method will call an RestAPI(GetInternalSSOKey) with parameters as project name and username as below.
  Ex.: "{"_parameters": [{"getssokey": {"axpapp": "trainee","username":"admin"}}]}"
- This will return the unique SSO key, and this can be used as query string along with username, projectname and language for the project URL.

Redis Connections at application level

A new feature is added in configuration page to set the Redis connections at application level (which is same as DB connections).

- Note:
  - Once a Redis connection tested and established, those connection parameters along with encrypted Redis authentication password is saved with connection name.
  - This file saved as 'redisconns.xml'
  - Multiple connections can be saved in this file with different connection names.
  - Redis configuration connection file can be used in other supporting Binaries, Agile Connect and Axpert Flutter Applications.
  - Introduced SetToRedis overload parser function with parameters 'SetToRedis(connectionname,keyname,keyvalue)'
  - Introduced GetFromRedis overload parser function with parameters 'GetFromRedis(connectionname,keyname)', where parameter 'connectionname' will be used to get the Redis connection details which is stored in the file 'redisconns.xml'

- Along with this feature, there are some changes in 'web.config' as explained below. Also, please note that these changes are required in application level considering security aspects as well since we are keeping Redis password in readable format.
  - Below 4 keys needs to be **removed**.
    - <add key="redisIP" value="" />
    - <add key="redisPass" value="" />
    - <add key="axpLic_RedisIp" value="" />
    - <add key="axpLic_RedisPass" value="" />
  - Below 2 keys are **added**.
    - <add key="redisCacheConnection" value="" /> (This key is using for application related data cache in Redis)
    - <add key="axpLicRedisConnection" value="" /> (This key is using for License details cache in Redis)
    - Example:
    - <add key="redisCacheConnection" value="R1001" />
    - <add key="axpLicRedisConnection" value="R1002" />
    - Where values R1001, R1002 are the connection names which are created through Redis connection setup in configuration page.

Chapter 2. What’s new in 11.1.1

Features & Enhancements

SSO integration through Azure AD

Steps to Enable SAML SSO:

- Add/Enable below web.config keys

  <add key="SamlPartnerIdP" value=""/ >
  <add key="ssologin" value=""/>
  <add key="ssoredirecturl" value=""/>
  Example:
  <add key="SamlPartnerIdP" value="https://sts.windows.net/0b1513a2-8f4d-4478-ab27-28da7a534984/"/>
  [After this, add application in Azure AD portal. It will generate 'Azure AD Identifier' url that needs to be copied]
  <add key="ssologin" value="saml"/>
  <add key="ssoredirecturl" value="http://demo.agile-labs.com/"/>

- ServiceProvider and PartnerIdentityProviders needs to be changed in saml.config file
  1. ServiceProvider Name: Identifier (Entity ID)
  2. AssertionConsumerServiceUrl: Reply URL (Assertion Consumer Service URL
  3. PartnerIdentityProvider Name: Azure AD Identifier url
  4. SingleSignOnServiceUrl: Login URL from Azure AD portal
  5. SingleLogoutServiceUrl: Logout URL from Azure AD portal
  6. Certificate FileName: Certificate name has to be specified here. And the same can be downloaded from Azure AD portal. Copy this into Saml_Certificates folder in webcode

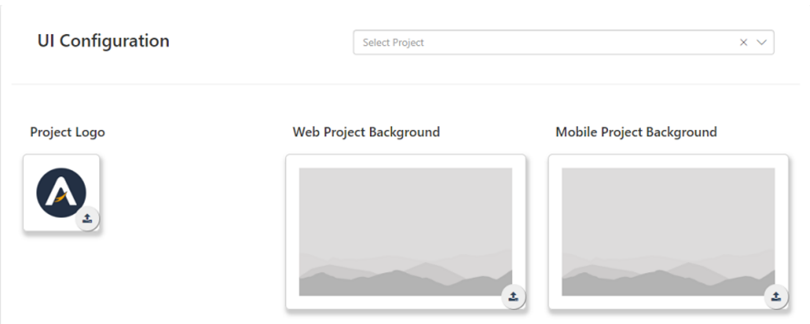
Enhanced Keep me sign-in functionality

This change will show a list of users logged from the browser with keep me sign in, and then the user needs to choose either to log in with another user or an existing user. If the user logs in and chooses the keep me signed in option then, next time the user can automatically log in.

Save and print in mobile app

In Axpert 11 mobile application, assigning save and print action in submit button.

UI Configuration



UI Configuration is made available in Axpert configuration page.
Project Logo: Insert the company or product logo based on project.
Web Project Background: Set the background display of your project with desired image.

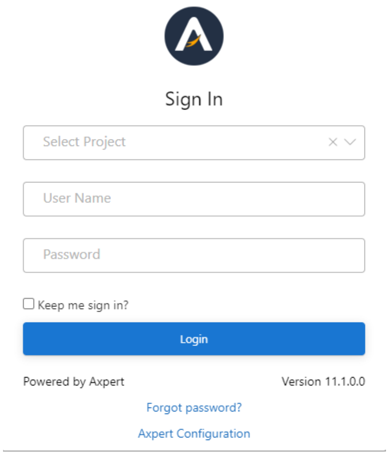
Mobile Project Background: Set the background image for your project in Axpert mobile application.

Chapter 3. What's new in 11.1

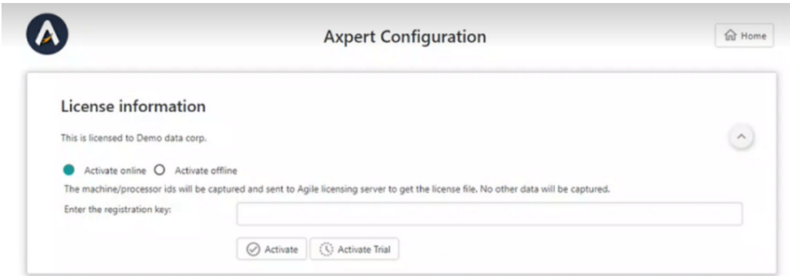
Features & Enhancements

Axpert Configuration on web

If a new site is being set up and has no Axpert license the configuration option is shown. To configure Axpert on the web, go to the run site of the designated server and find the Sign-in option. Click on Axpert Configuration option.



The Axpert configuration page opens up. There are two types of license activation options available as shown below.



1. Activate Online:

If you want to activate your license online, then click on the radio button next to it.
Enter the registration key in the text box and click on activate. On successful activation, License information will be displayed as shown.

2. Activate Offline:

If you want to activate your license offline then choose the "Activate offline" option on the screen. Enter the registration key in the box and download the registration file. The downloaded .reg file has to be sent to the licensing team for activation requests.

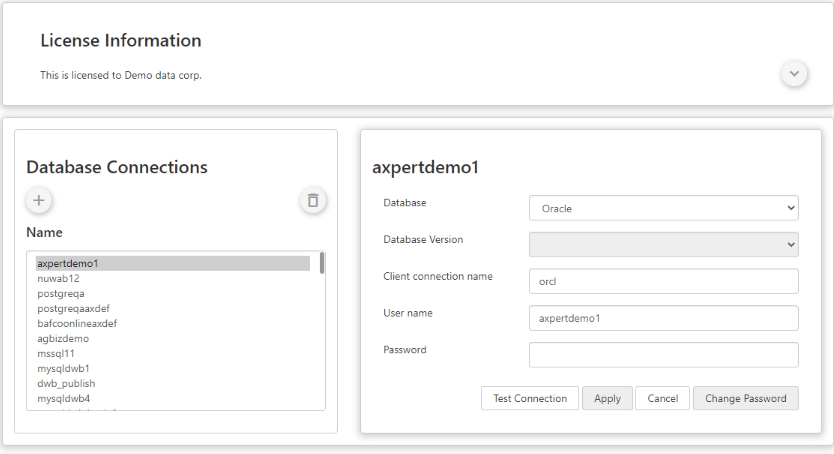
In return, the licensing team will provide you with a configured license file. This file has to be uploaded to the site using the "Upload license file" option.

Once the file is uploaded, the license will be activated and related license information will appear on the screen.

Once the license activation is successful the database connection and demo will be enabled.

Testing database connection while creating new connection

Create a new DB connection by clicking on the '+' button on-screen, providing the required credentials. Click on Test Connection.



If the test connection is successful, click on apply. Enter a new connection name and click on OK.
Find the new connection in the DB connections list.
Try logging into the developer site to confirm successful creation.

DB Password Change

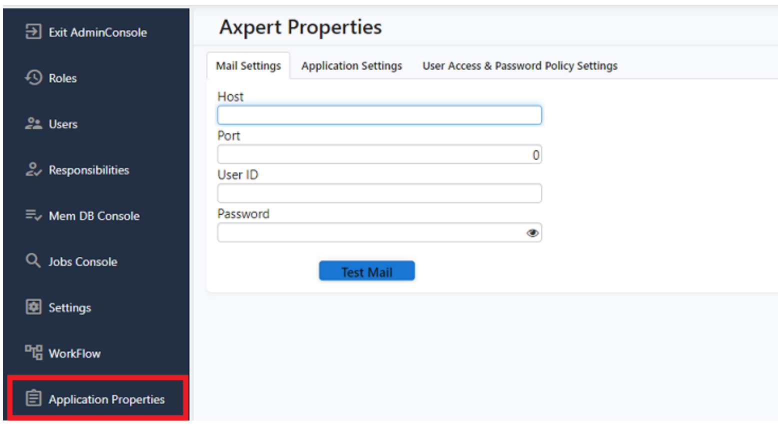
Click on Change password and enter the new password.
Click on Apply to change the existing password and wait for the "Password changed successfully" message.
Try connecting to the DB by entering new password to ensure the change.

Application Properties

Incorporated application properties in web which were available in Axpert desktop.

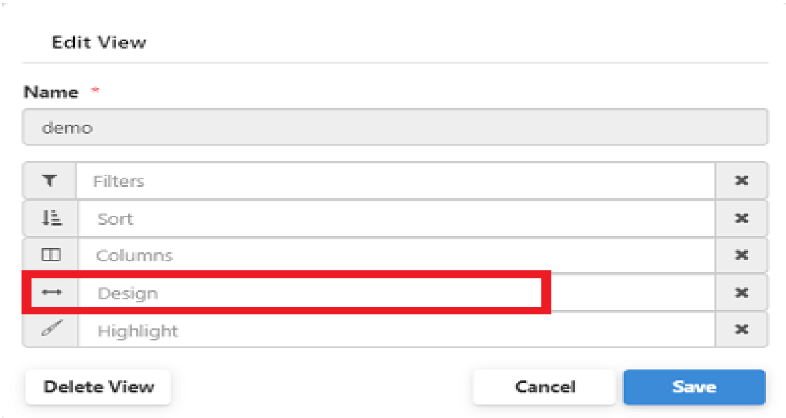
Steps to set or modify application properties:

3. In run site, go to Admin Console.
4. Click on Application properties option available on the side bar.
5. Set Axpert properties as per the requirement.

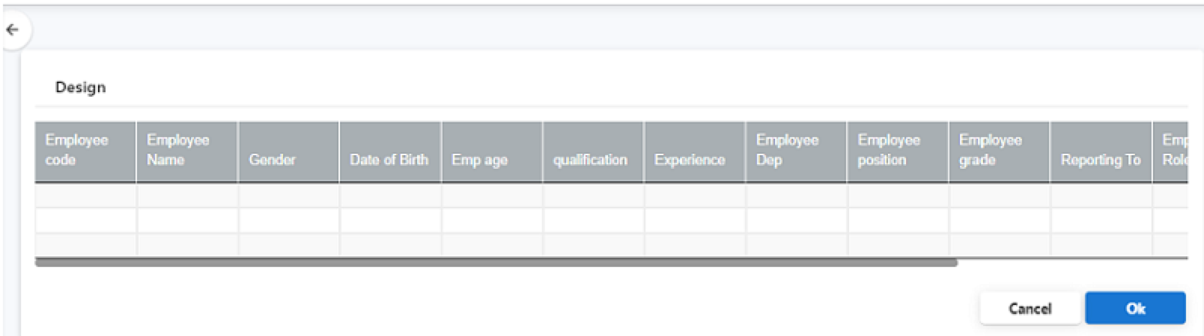


List View Designer for Smartviews

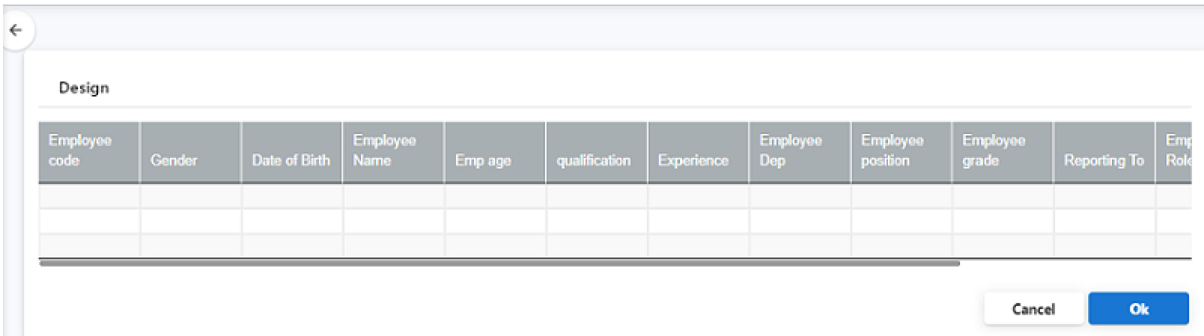
To enhance user experience in list view a design option is provided. Using this the columns can be resized and moved as desired.



One can drag and drop items to rearrange or resize column width and click on OK



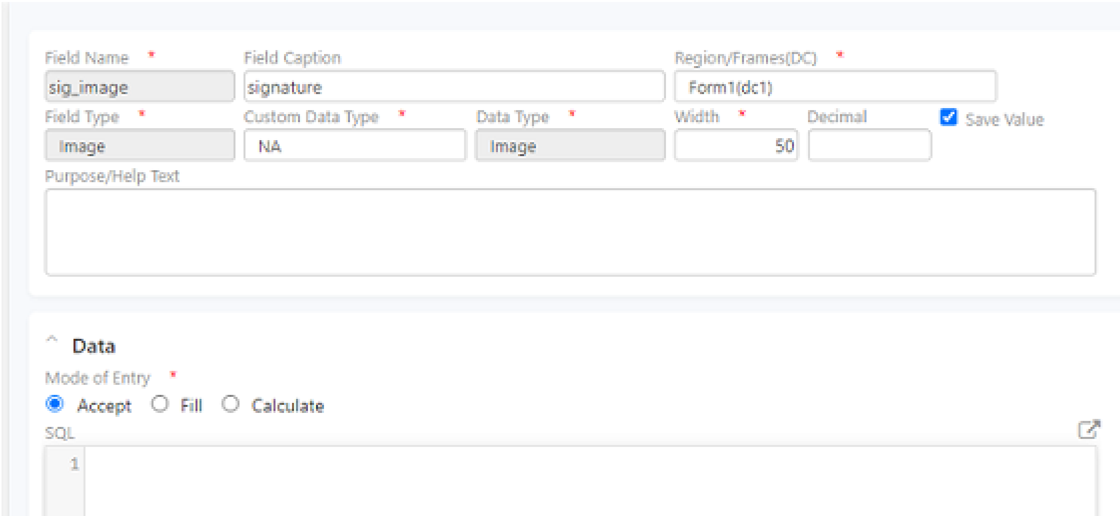
For example, Moved Employee Name field after Date of Birth.



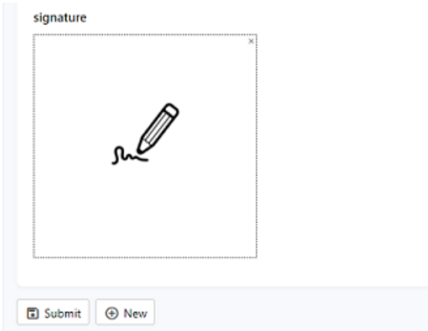
Capture signature in Axpert

We have a field that can accept digital signatures.

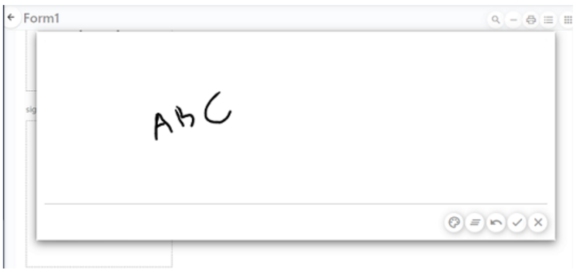
- Create an image field with “sig_” prefix. For example, “sig_imagename”



- In the run site, a field to insert a signature is provided.



- Click on the icon to add the signature manually. Click on the right mark at the bottom to save the signature successfully.



Download files from Iviews

Download the file/attachments in IViews when provided the mapped path. To achieve this, below iview configuations needs to be applied.

➢ Concerned Iviews should have the following columns by default.
- transid: transid of the tstruct.
- If isdbattach column value is true then transid column value should be ("transid+fieldname")
- If isdbattach column value is true and is db attachment is header attachment then only "transid" should be passed.
- fieldname: field name in tstruct(to be kept empty for header attachment)
- recordid: transaction record id.

- isdbattach: this is an optional column which determines wheater the attachment is db attachment or file attachment, if the attachment type is db attachment then this column value should be true
- axp_attach (can be any one of following):
- Text to be shown on download hyperlink (this column is a flag to enable/disable attachments component)
- Grid attachment name (value of grid attachment)
- Full mapped path if transid, fieldname, recordid is not provided
- ResolvePathForTemplates : "resolve attachment path" property is used for iview templates in case of resolving image path to show image in iview templates. "Resolve attachment path" Advanced Setting configuration property with property code as "resolve attachment path" to be added as true or false.

Note:

➢ If File Server and App Server are different systems, then File Server needs to be authenticated for downloading or uploading the files with following Application Variables, provided both servers should be in same domain.

- axp_mapusername
- Username for the domain
- axp_mappwd
- Password for the domain
- axp_domain
- Domain Name

Example:
DB Attachment

- select 'gddwn' transid_real,gddwn1id recordid,'dc2_image' fieldname,dc2_image axp_attach,'gddwndc2_image'transid, 'true' isdbattach from gddwn2

Non DB Attachment

- select null transid_real,gddwn1id recordid,null fieldname,replace(axpfilepath_img,'*','')||axpfile_img axp_attach,null transid, 'false' isdbattach from gddwn1

DB + Non DB Attachment

- select 'gddwn' transid_real,gddwn1id recordid,'dc2_image' fieldname,dc2_image axp_attach,'gddwndc2_image'transid, 'true' isdbattach from gddwn2
  union all
  select null transid_real,gddwn1id recordid,null fieldname,replace(axpfilepath_img,'*','')||axpfile_img axp_attach,null transid, 'false' isdbattach from gddwn1

Chapter 4. What's new in 10.9

Features & Enhancements

Server Based Licensing for Axpert Web Applications

The licensing is being modified from 10.9 Product Version to introduce the Instance / Server Based license according to the current business model / need.
The main functional changes in new license model are as follows:

1. Named users check is removed and concurrent logins check introduced for limited user licenses.
2. Removed product code checking.

Accordingly, Axpert Desktop, Web and Developer/build license have been categorised as follows:

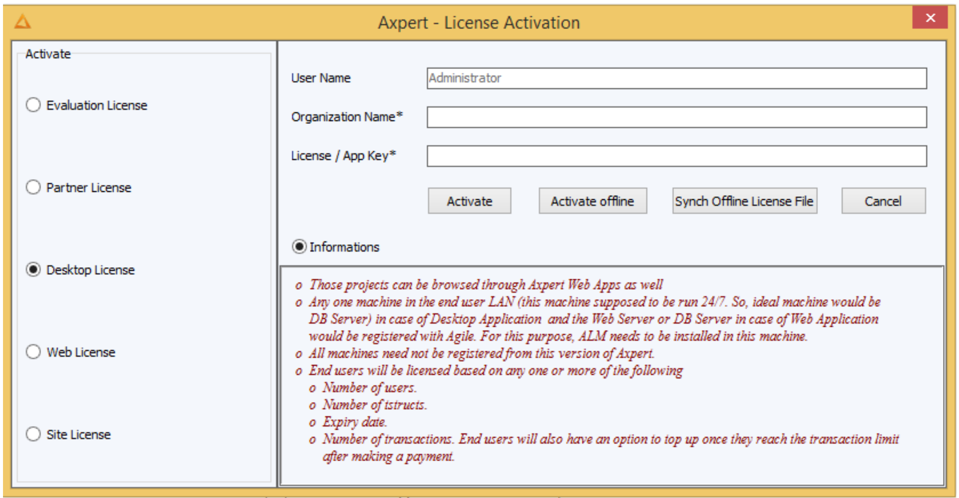
1. Evaluation License
2. Partner License
3. Desktop License
4. Web License
5. Site License

All the above License Editions are same as existing license edition except the following.

<u>Desktop Edition (ALM Required).</u>

This edition is same as previous version End user license Edition and this license edition is considered as schema / project-based licensing.

- Any one machine in the end user LAN in case of desktop version and the web server in case of web version will be registered with Agile. All machines need not be registered as in the current practice.
- End users will be licensed based on any one or more of the following
  - number of users
  - number of TStruct, IViews
  - expiry date
  - number of transactions.

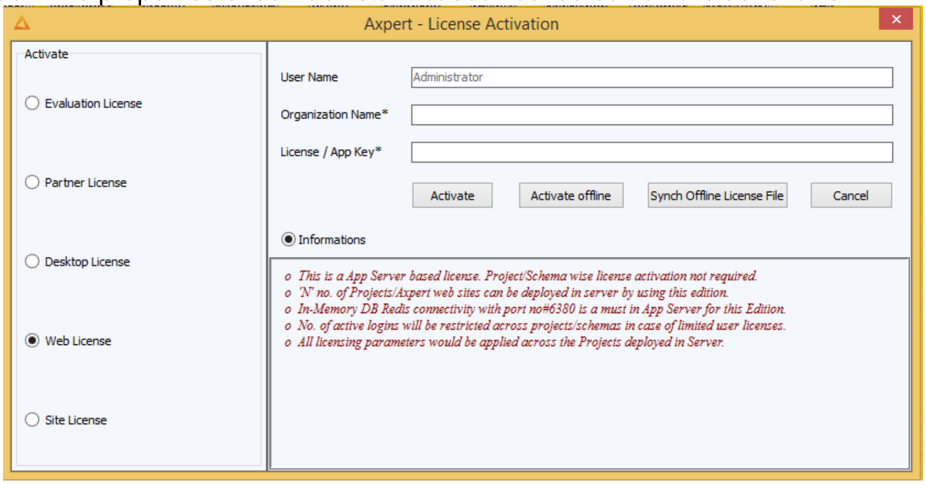


- Apps developed on Axpert need Axpert Desktop license to run the Apps as Desktop Projects.
- Axpert Desktop license is DB Schema based license. Each Project requires separate license activation
- Those projects can be browsed through Axpert Web Apps as well
- Any one machine in the end user LAN (this machine supposed to be run 24/7. So, ideal machine would be DB Server) in case of Desktop Application and the Web Server or DB Server in case of Web Application would be registered with Agile. For this purpose, ALM needs to be installed in this machine.

- All machines need not be registered from this version of Axpert.
- End users will be licensed based on any one or more of the following
- Number of users.
- Number of TStruct.
- Expiry date.
- Number of transactions. End users will also have an option to top up once they reach the transaction limit after making a payment.

Web Edition (Server Based)

This is the new license edition introduced from 10.9 Axpert version as per the new business model. The properties of server/instant based license edition are as follows.



- This is an App Server based license. Project/Schema wise license activation not required.
- 'N' no. of Projects/Axpert web sites can be deployed in server by using this edition.
- In-Memory DB Redis connectivity is a must in App Server for this Edition.
- No. of active logins will be restricted across projects/schemas in case of limited user licenses.
- All licensing parameters would be applied across the Projects deployed in Server.

1. This newly introduced Web license would be working based on below web.config keys with proper values.
   - <add key="axpLic_RedisIp" value=""/>
     - Ex.: 127.0.0.1:6380
   - <add key="axpLic_RedisPass" value=""/>
     - Ex.: agile.01
   - Note: [axpLic_RedisIp should be 127.0.0.1]

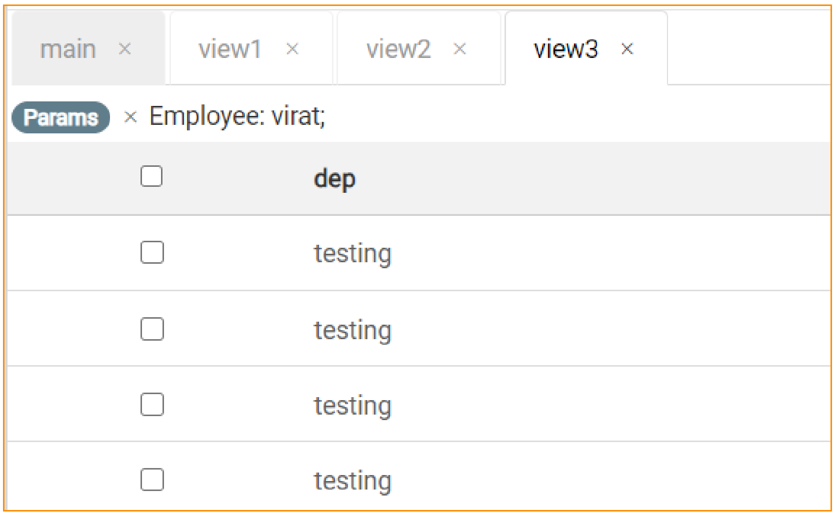
2. Web license redis setup:
   - Duplicate redis.windows-service.conf file to redis.windows-service-axplic.conf and change following property values
     - dbfilename (Ex.: axplic_dump.rdb)
     - port (Ex.: 6380)
     - requirpass (if required)
   - Following commands needs to run.
     - Redis-server --service-install redis.windows-service-axplic.conf --service-name axplic_redis
     - Redis-server --service-start --service-name axplic_redis
3. If the web license key is for limited user then following variable should add in system environment variable
     - Variable name: "axpLic_RedisIp"
     - Variable value: 127.0.0.1:<portno> Ex.: 127.0.0.1:6380

Modern SmartView's

Smartviews are completely modernized with added features, performance impovements and customizations:

View Tabs

Modern SmartView's introduces a new functionality of saving user/admin defined views with parameters, charts, filter, sort, row grouping, columns, highlight and action bar pins called Views. Views for SmartViews can be created and saved by individual user and administrator.

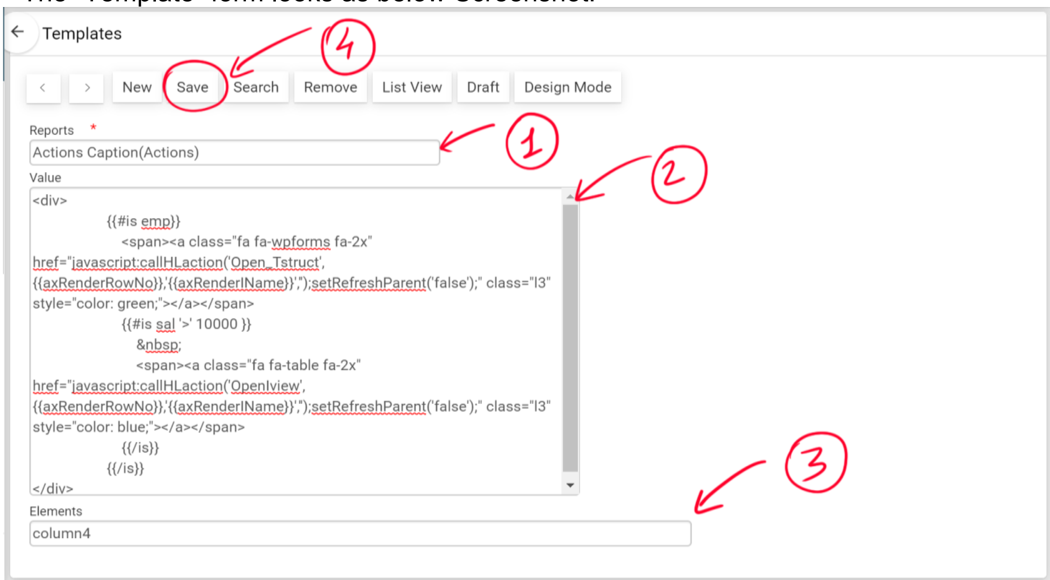


Dynamic Column UI And Action Templates
The SmartView's columns template can be changed to achieve desired UI and Actions. This is done by doing the following steps.

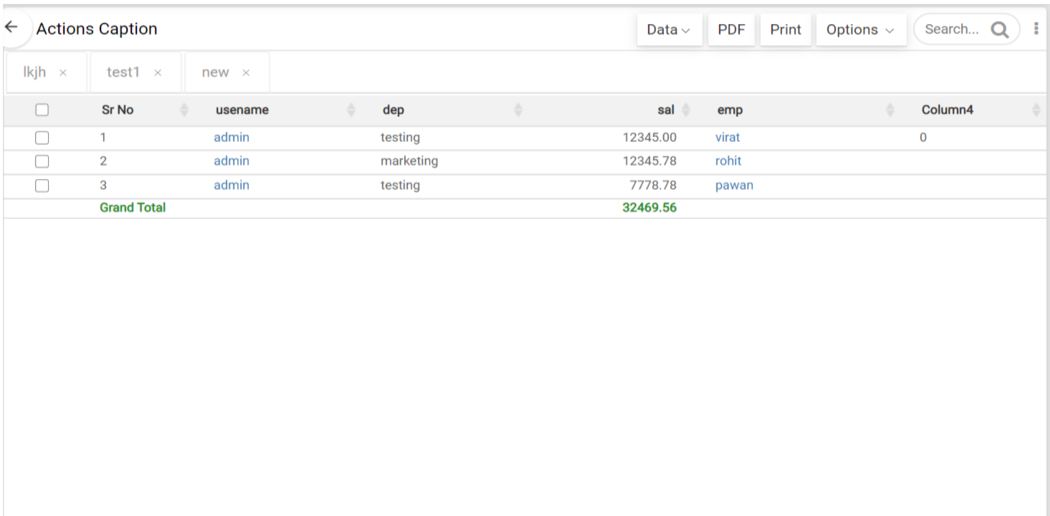
- Create HTML using Handlebars expression format. Refer [Handlebars reference website](#).
- Handlebars template will refer iview column names as expressions, including additional expressions like axRenderProject, axRenderIName, axRenderRowNo, axRenderThis, etc.
- Handlebars will add flexibility of writing expressions, conditions and loops in html.
    - Added Helpers
        - is: "is" helper is an enhanced version of "if" helper supporting additional conditional operations like:
            - ==
            - ===
            - !=
            - !==
            - <
            - <=
            - >
            - >=
            - contains: Contains string
            - toUpper: To upper equals
            - toLower: To lower contains
            - undefined: Is expression undefined
            - false: Always false
            - is: Equivalent to if expression
        - split: if data contains any split character then this helper can help split and loop through that expression

- This Template may be repeated for every row.
- Once the HTML is ready, open the templates open form menu in Axpert dot net
- Enter the iview name,
- Copy the HTML into the text box and save. Select “All” in the Events field.

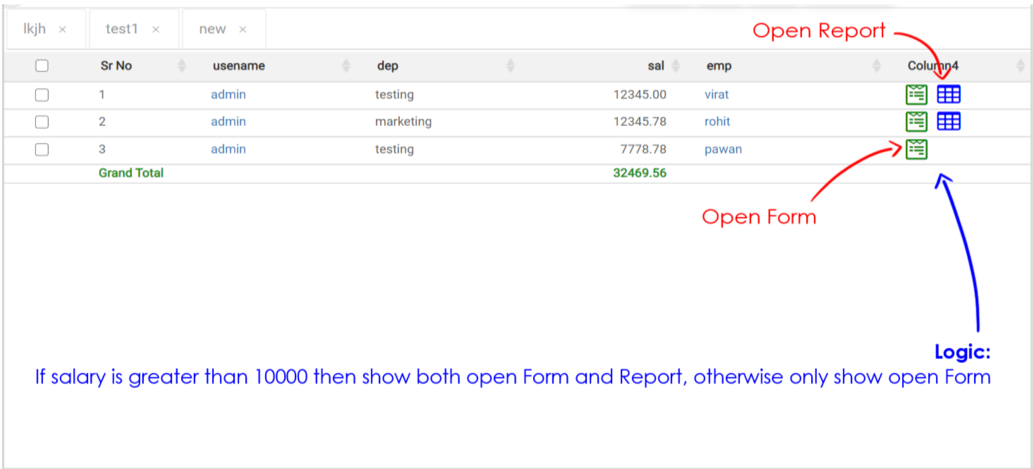
The “Template” form looks as below Screenshot:



- **Screenshots:**
  - Before Template:



  - After Template:



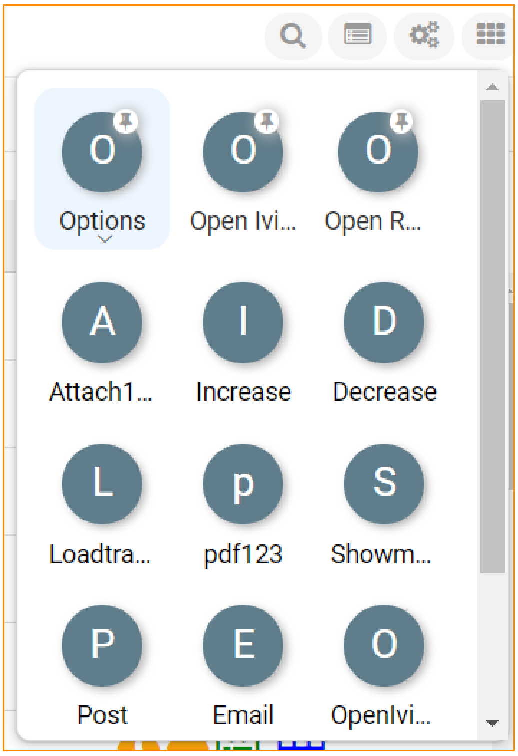
Column Template Code Example

```
<div>
    {{#is emp}}
        <span>
            <a class="fa fa-wpforms fa-2x"
                href="javascript:callHLaction('Open_Tstruct',{{axRenderRowNo}},'{{axRenderIName}}','');setRefreshParent('false');"
                class="l3" style="color: green;">
            </a>
        </span>
        {{#is sal '>' 10000 }}
             
            <span>
                <a class="fa fa-table fa-2x"
                    href="javascript:callHLaction('OpenIview',{{axRenderRowNo}},'{{axRenderIName}}','');setRefreshParent('false');"
                    class="l3" style="color: blue;">
                </a>
            </span>
        {{/is}}
    {{/is}}
</div>
```

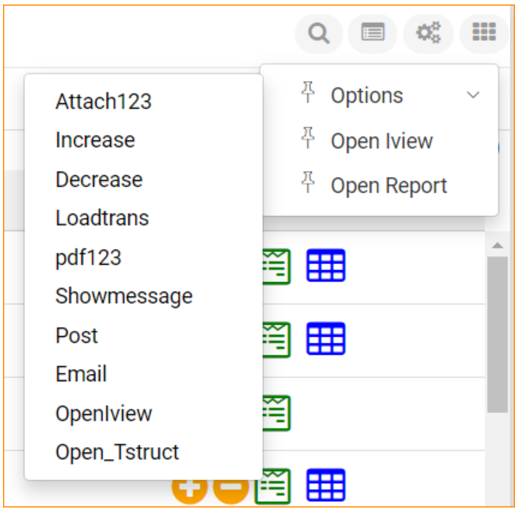
Modern and Classic Button Options

SmartViews provide two types of button UI i.e. Modern and Classic Buttons which administrator can switch by adding “`Iview Button Style`” Developer Option.

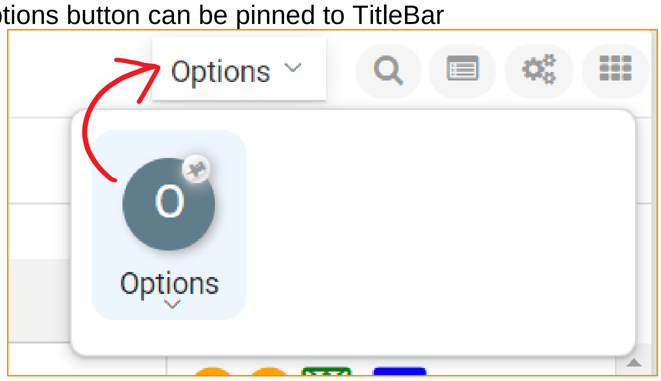
- **Modern Buttons**



- **Classic Buttons**

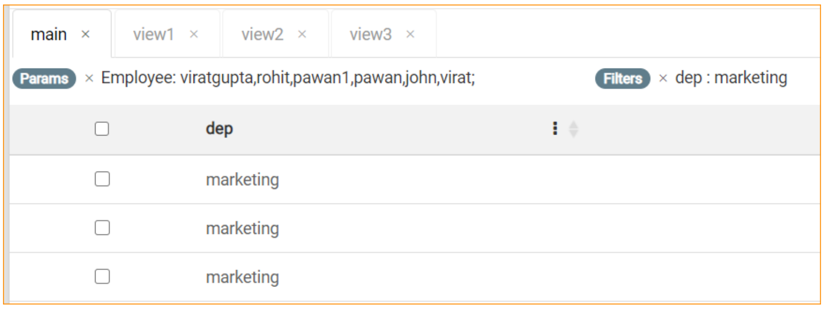


- **Options Pinning**
  Required Options button can be pinned to TitleBar



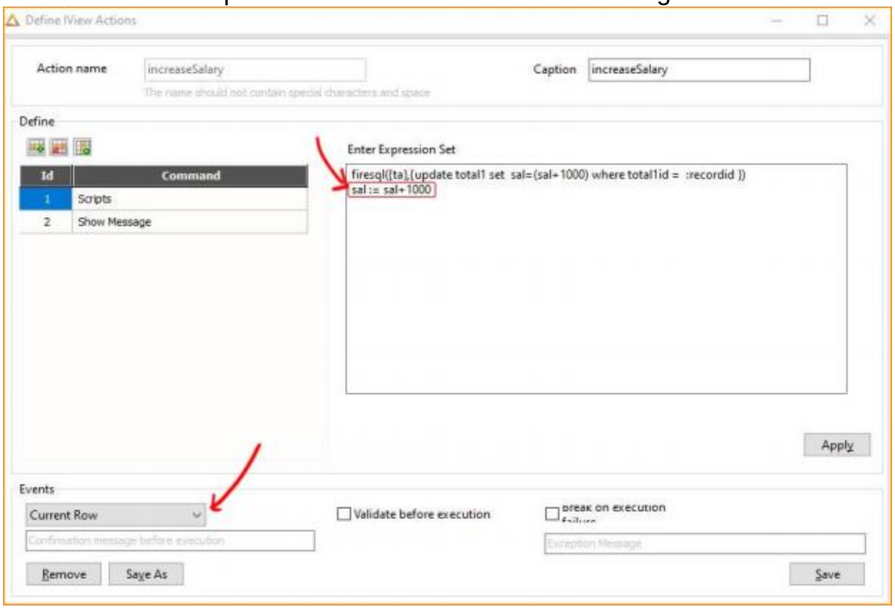
Param and Filter Strings

Params and Filters string will be visible in Smartviews.



Individual Row Refresh for Actions

Modern SmartView's will update single row in Report if action event is selected as "`Current Row`" and action definition updates back the variable like following:

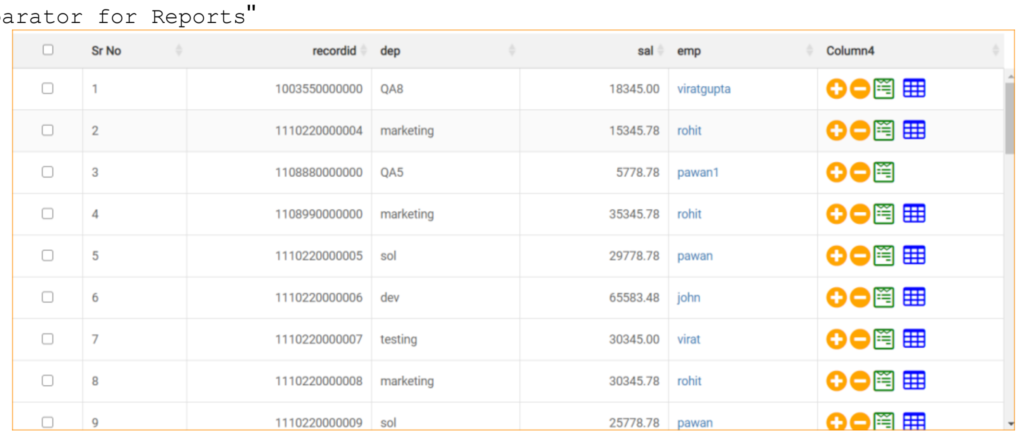


Column Background introduced in web

Background color added to column will be visible in web.

Column Separator

Column Separator for smartviews can be enabled by adding Developer Option "`Column Separator for Reports`"



Sr No	recordid	dep	sal	emp	Column4
1	1003550000000	QA8	18345.00	viratgupta	
2	1110220000004	marketing	15345.78	rohit	
3	1108880000000	QA5	5778.78	pawan1	
4	1108990000000	marketing	35345.78	rohit	
5	1110220000005	sol	29778.78	pawan	
6	1110220000006	dev	65583.48	john	
7	1110220000007	testing	30345.00	virat	
8	1110220000008	marketing	30345.78	rohit	
9	1110220000009	sol	25778.78	pawan	

Mobile Reports as Table

Tables can be enabled in mobile view by enabling Developer Option "`Mobile Reports as Table`"

Old Iview UI

Administrator can altogether disable Modern SmartViews feature and switch back to old smartviews UI by adding Developer Option "`Load Old Model Views`"

Notifications for Long Running Webservice's

Notification feature can be enabled at Application level by adding Developer Option "`Notification Time Interval`". Once this key is added, long running web services/backend scheduled jobs completion can be notified to the user with given time intervals, so that user would be able to do other operations during long running web services/backend jobs.

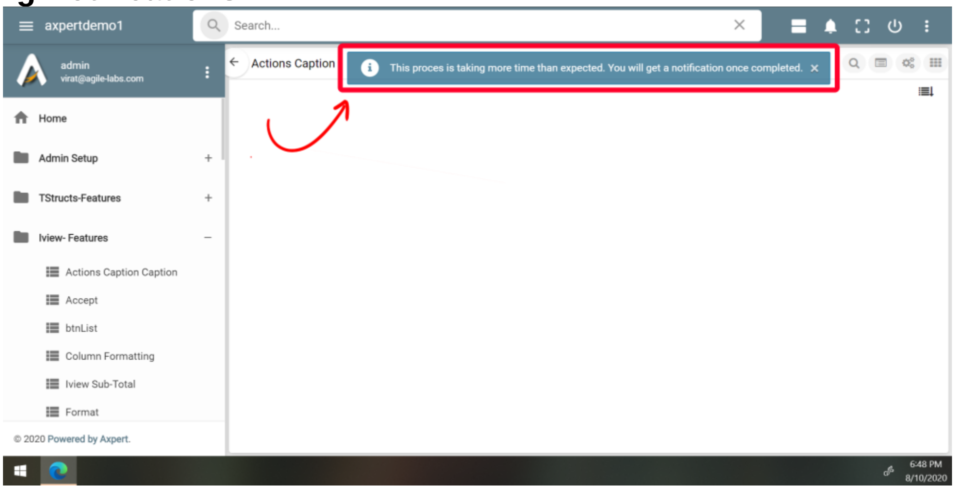
Form Actions

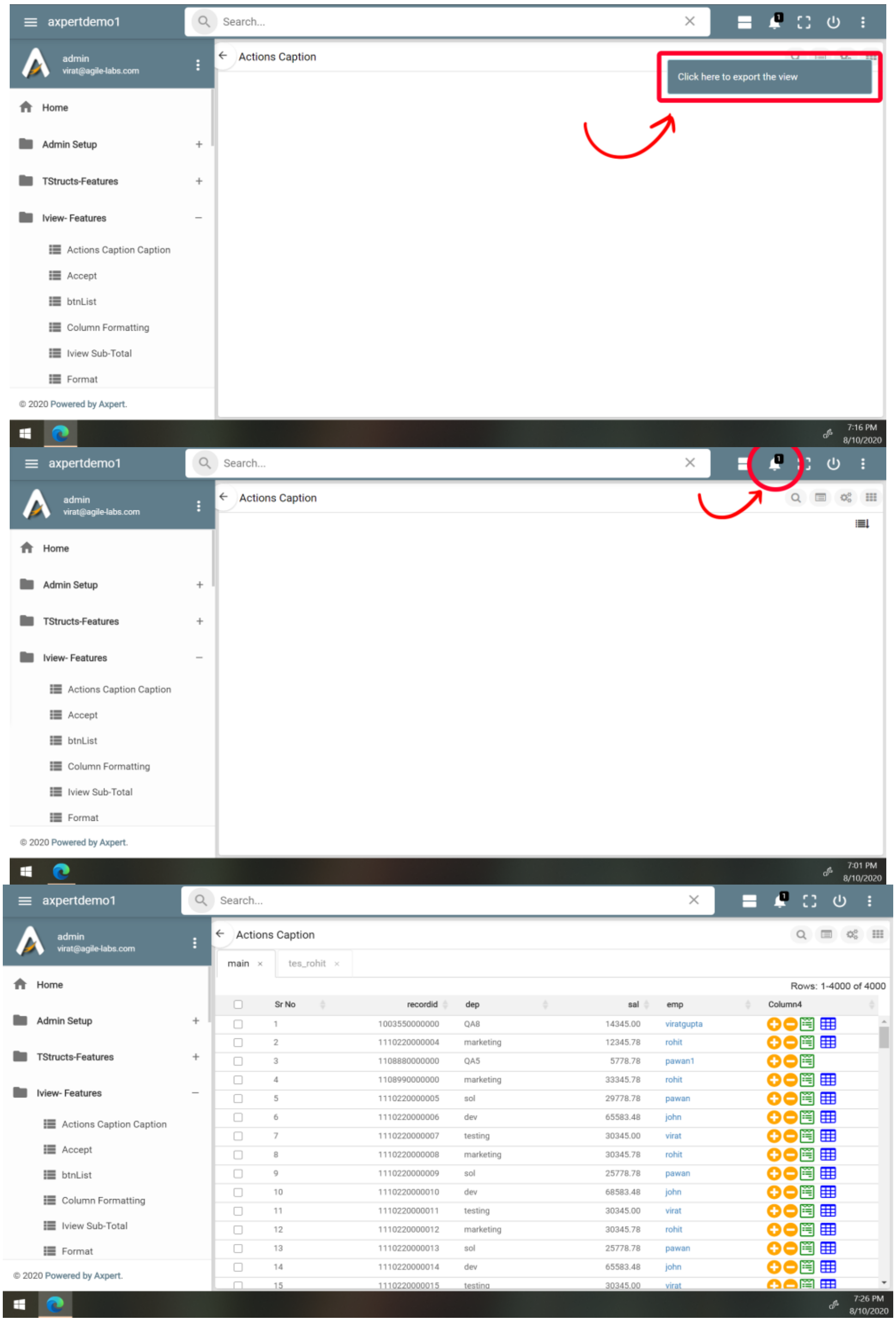
- **Import Data**
  If import data is taking more time than expected to import data, for example 30 minutes. Then users don't need to wait for such long time and can continue working on other tasks. Once the operation is completed then automatically notifications gets shown in notification panel.
- **Managing Redis Cache**
  Modern SmartView's Redis cache can be managed from "In Memory DB" page.

SmartView's

- **Load**
  If SmartView's contains large number of data and user has requested to load all records for that smart views, then instead of throwing timeout error user can continue doing other operations and he will get notification once iView is loaded completely.
- **Print, PDF and EXCEL**
  If SmartView's contains large number of data and user has requested to export Print, PDF or Excel for that smart views, then instead of throwing timeout error user can continue doing other operations and he will get notification once iview is loaded completely.

Accessing Notifications





Configuration for Enabling Notifications

Notification feature can be enabled Application level by adding Developer Option “notification timeout” with Property Code as "General" and Values as "1 / 5 / 10 / 30 / 60"

If “`Notification Time Interval`” Developer Option is not set then notification feature will be disabled.

Extending Webservices Timeout without Notifications

Old Iview UI can be enabled by setting Developer Option "Load Old Model Views" as "true". Webservice Timeout can be can be extended For SmartView’s and Form’s actions independently by adding Developer Option “Webservice Timeout” with Property Code as “Webservice Timeout” and Values as "100000(default)/200000,300000/etc"

File Upload in TStruct

Intro of the feature:

1. File uploads can be done by creating specialised File Upload fields in TStruct with same input field name.
2. These can be created in both Grid and Non-Grid DC.
3. The file path & server specific to a File Upload field can be set by creating a File Path field.
4. A File Upload field will provide a button to upload files and view the uploaded files and remove the files.

Instructions to add input field in definition:

1. The field name should be prefixed with **AxpFile_**. Such field is called the file Upload Field.
2. The File Path field should be prefixed with **AxpFilePath_**.
3. The FileUpload field name should be suffix with AxpFilePath_ in a FilePath field.

Example: If the file upload field is **AxpFile_MyImage**, the corresponding file path field name should be **AxpFilePath_MyImage**.

InputField	AxpFile_MyImage	Attachment
InputField	AxpFilePath_MyImage	Attachmentpath

4. FilePath value Suffix with * to add a file name modifier.

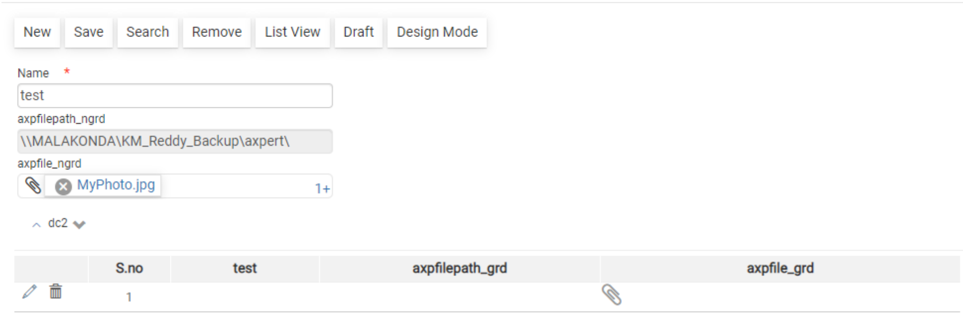
Example:

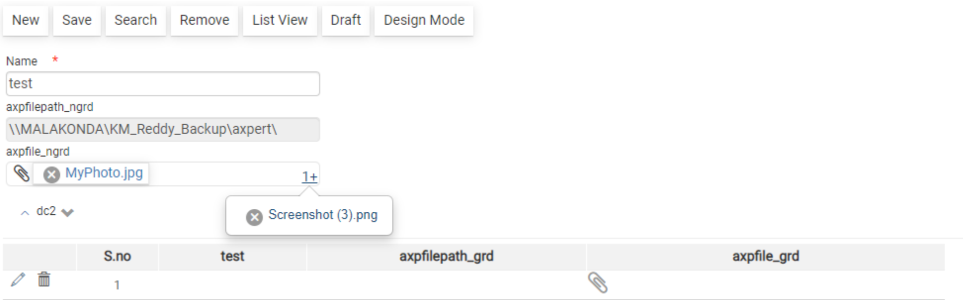
- if file path is**\\IServer\Images**, then the file that is named as "**MyPhoto.JPG**" is uploaded, it will be stored as **\\IServer\Images\MyPhoto.JPG**.
- In case the file path is **\\Server\Images\07082020***, and a file named "**MyPhoto.JPG**" is uploaded, it will be stored as **\\Server\Images\07082020MyPhoto.JPG**
- In case the file path is **\\Server\Images***, and a file named "**MyPhoto.JPG**" is uploaded, it will be stored as **\\Server\Images\(20 digit random number)MyPhoto.JPG**
  Ex: \\Server\Images\12345678901234567890MyPhoto.JPG

Note: For each field there will be a separate file path. If there is no expression set in AxpFilePath_ field or AxpFilePath_ field not define, It will take axpImagePath as file path.

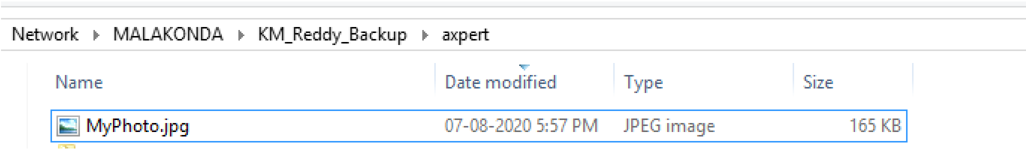
Functionality of the feature:

1. For every Attachment field there will be a one attach icon for attach files to the corresponding field.
2. If the field width is not sufficient to show all the file names, then remaining file will move inside a popover. And according to the number of remaining files it will show a hyperlink inside current input field as **num+** for opening corresponding popover.
   - Below screenshots are showing the remaining files hyperlink as **1+** and popover (which is showing the remaining files).

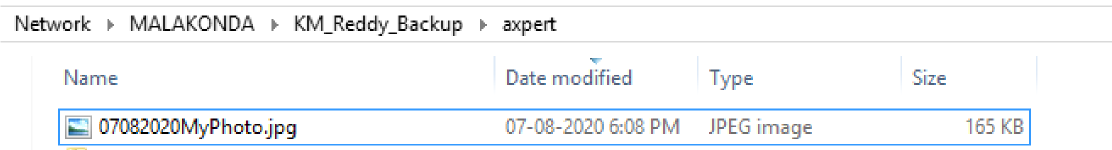




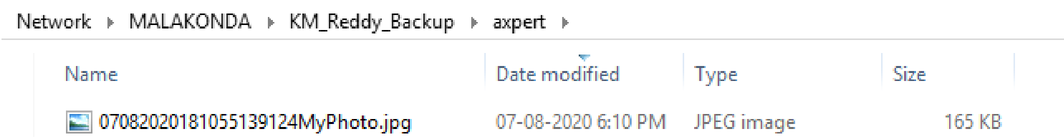
3. If file path is \\MALAKONDA\KM_Reddy_Backup\axpert\ and we are attaching **MyPhoto.jpg** file, then file will store in \\MALAKONDA\KM_Reddy_Backup\axpert\ and the filename will be **MyPhoto.jpg** .



4. If file path is \\MALAKONDA\KM_Reddy_Backup\axpert\07082020* and we are attaching **MyPhoto.jpg** file, then file will store in \\MALAKONDA\KM_Reddy_Backup\axpert\ and the filename will be **07082020MyPhoto.jpg.**

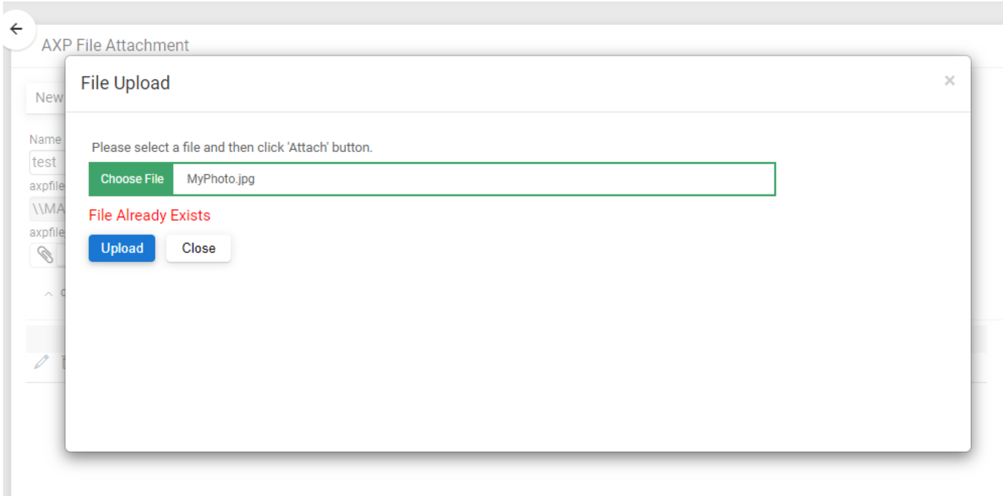


5. If file path is \\MALAKONDA\KM_Reddy_Backup\axpert* and we are attaching **MyPhoto.jpg** file, then file will store in \\MALAKONDA\KM_Reddy_Backup\axpert\ and the filename will be **(20 digit random number)MyPhoto.jpg.**

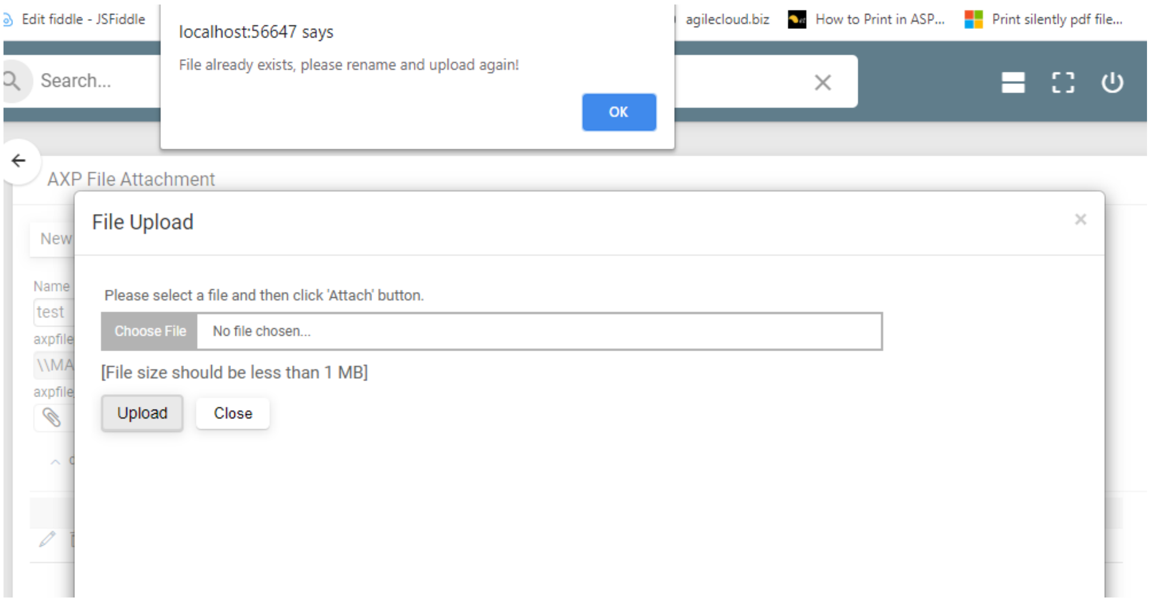


6. For a Current record only one file will be allowed with the same name.

Example: If previously uploaded **MyPhoto.jpg** file ,then it will not allow to attach same file name with the same record. It will show **File Already Exists** .



7. If Uploading file already exists in the path it will give a alert and need to rename the file and upload again.



8. If we delete any file, it will be removed from the corresponding filepath.

Login

SSO Login

SSO authentications are in built in the AxpertWeb with followings such as OKTA, Office365, Google Account & Face Book. User can choose multiple SSO Authentications based on requirement.

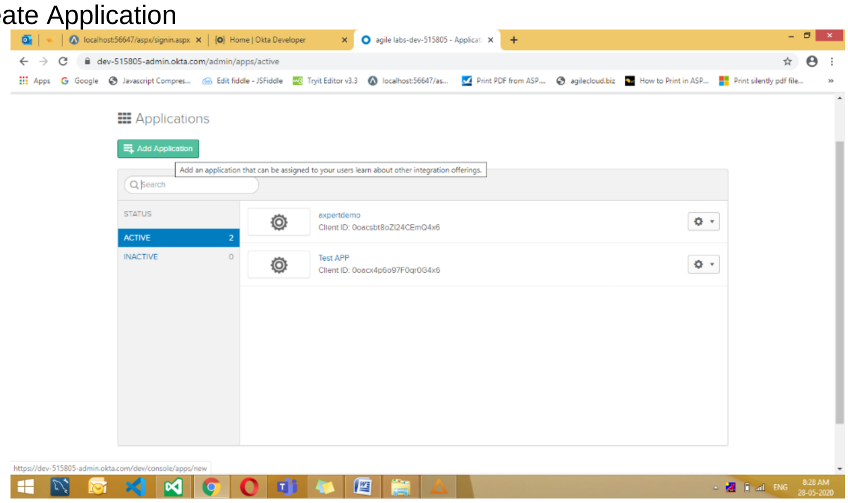
Configurations:

1. Should be registered Client ID from each SSO in their developer sites examples given individually.
2. Should be enabled below keys in web.config file in the webcode.
   a. **ssologin** : okta,office365,google,facebook
   Ex: <add key="ssologin" value="okta,office365,google,facebook"/>
   b. **ssoclientKey** : oktaClientild,office365ClientId,googleClientId,facebookClientID
   Ex: <add key="ssoclientKey" value="0oacsbt8oZl24CEmQ4x6,bfff8cad-3c1c-4c14-9499-2423c724f3b7,493358977849-so1sc0tcs9gqrh4jiuaqs36jr9cns0cv.apps.googleusercontent.com,252601612604428"/>
   c. **ssoclientsecretKey** : Client Secret Id have the google and facebook only and below is the example.
   Ex: <add key="ssoclientsecretKey" value=",,ChzG0QxESuMZkQ--mStkSj9z,2bdba09e6ba0e2f47225487344153b59"/>
   d. **ssoredirecturl** : This is basically redirect URL after SSO authentication
   Ex: <add key="ssoredirecturl" value="https://demo.agile-labs.com/"/>

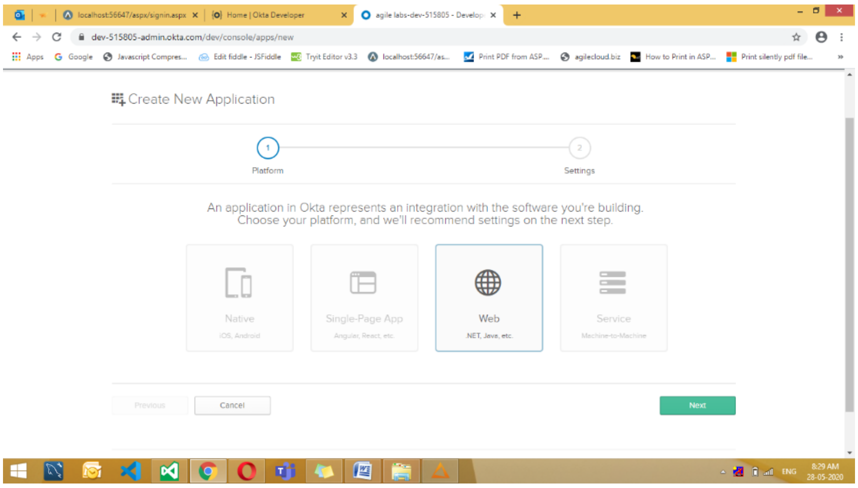
Note : There should be a corresponding entry in axusers table for those login names which are used to login to Apert Web through SSO authentications.

OKTA:

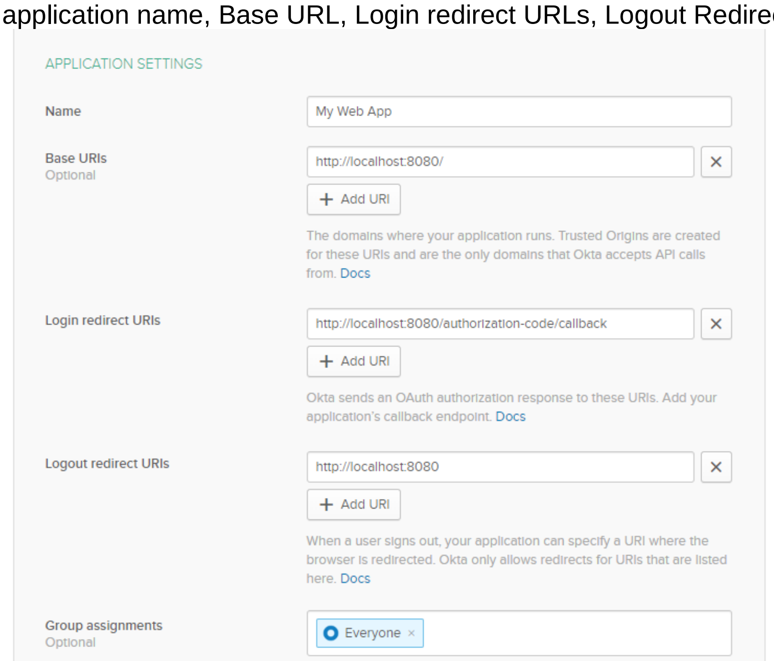
a. https://developer.okta.com/
b. Create Application

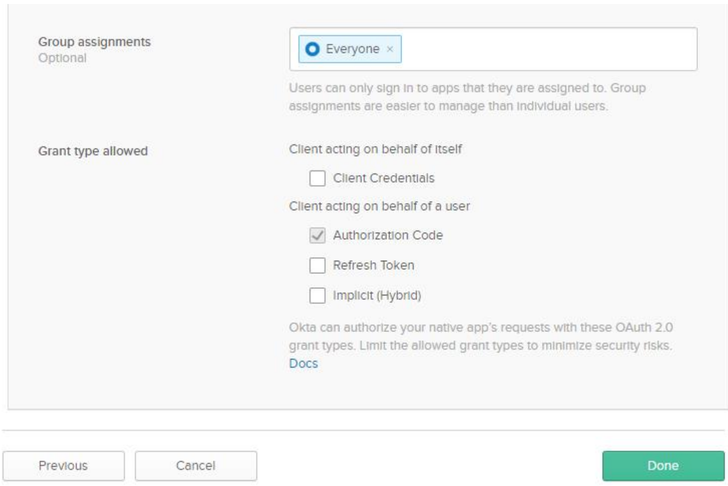


c. Web Application

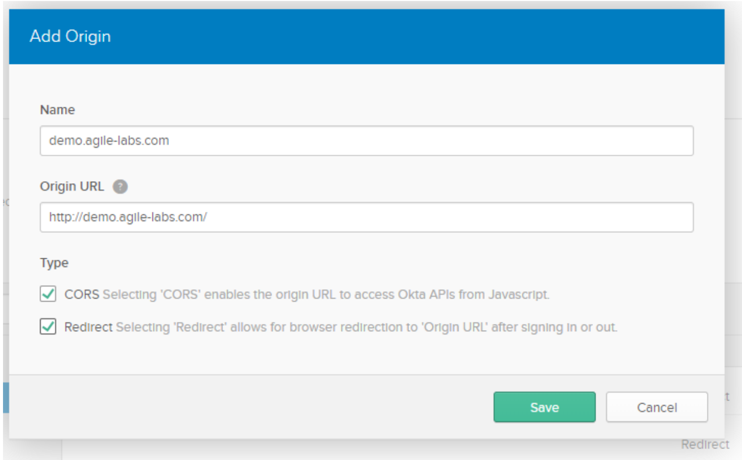


d. Enter application name, Base URL, Login redirect URLs, Logout Redirect URLS

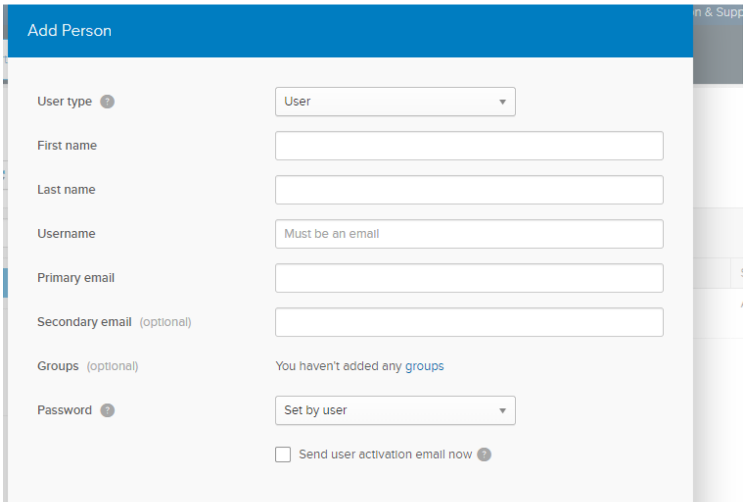




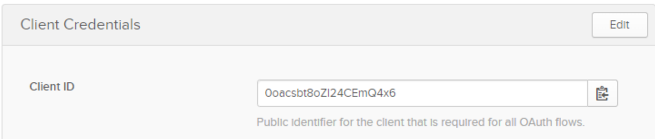
e. API -- Trusted Origins



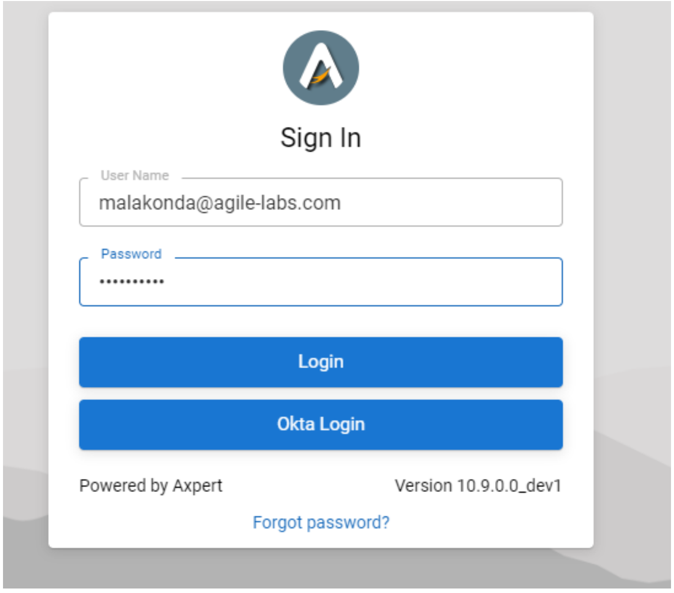
f. Users --> Add Person



g. Copy Client ID and add the same in web.config

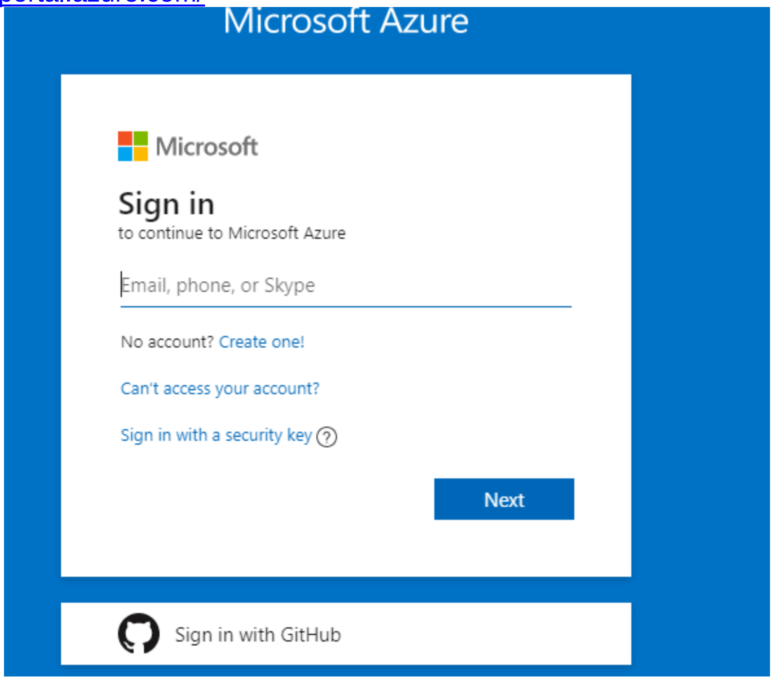


h. OKTA will not give a popup window to enter username & password, so in this case username & password has to enter as normal login. but for other SSO login will show the popup there has to be enter the username and password.

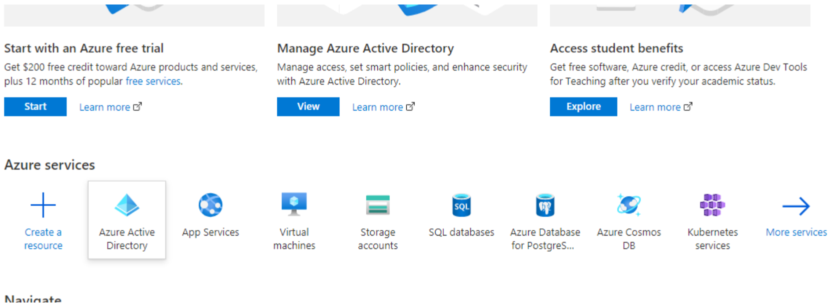


Office365:

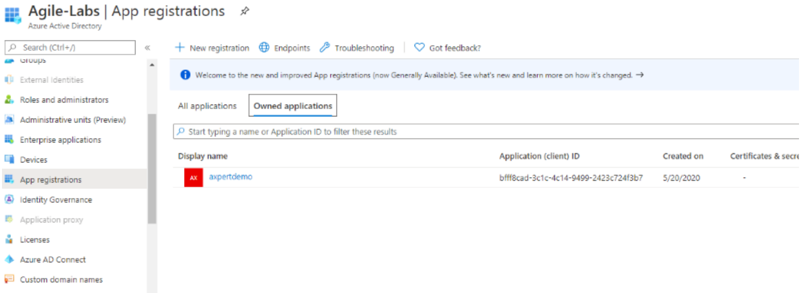
a. https://portal.azure.com/



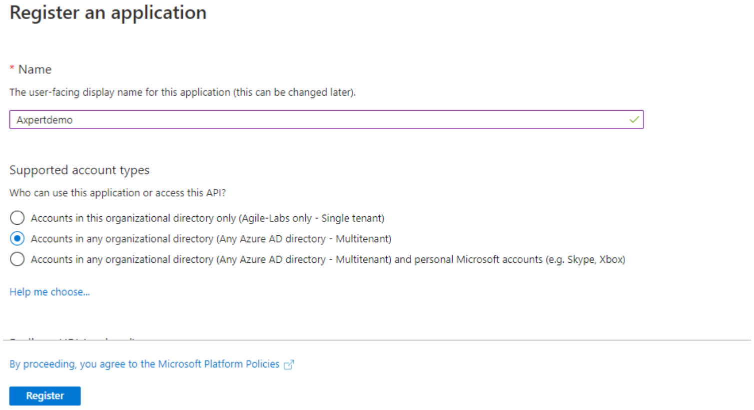
b. Select Azure Active Directory Service



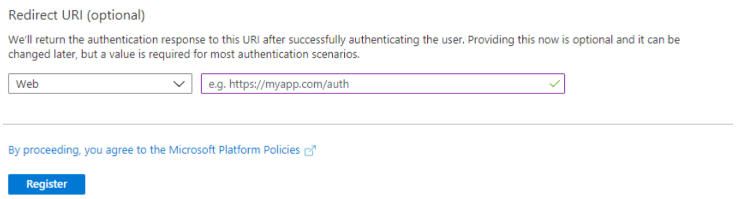
c. Choose App Registrations --> New Registration



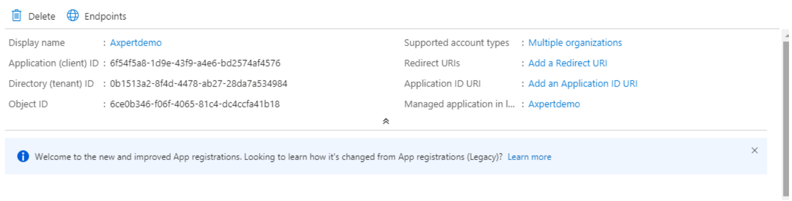
d. Enter application name & Choose Supported Account Type



e. Choose redirect URL type as Web & enter the redirect URL

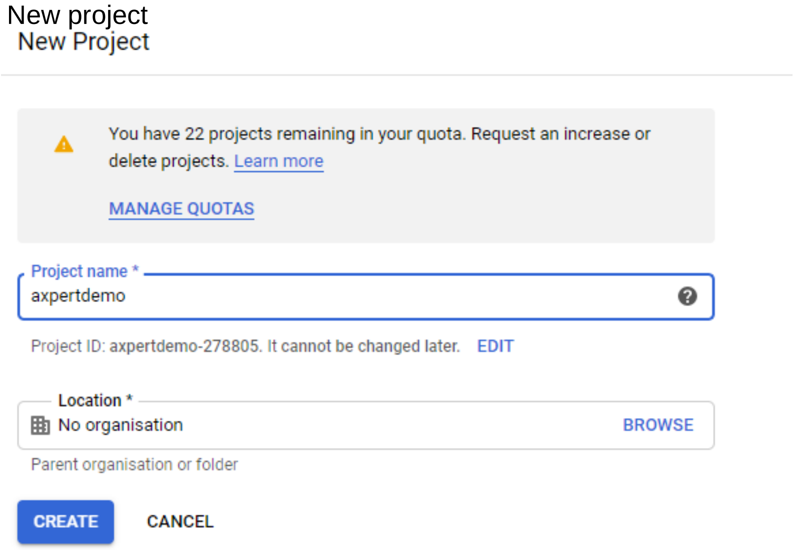


f. Copy Client ID and add in web.config

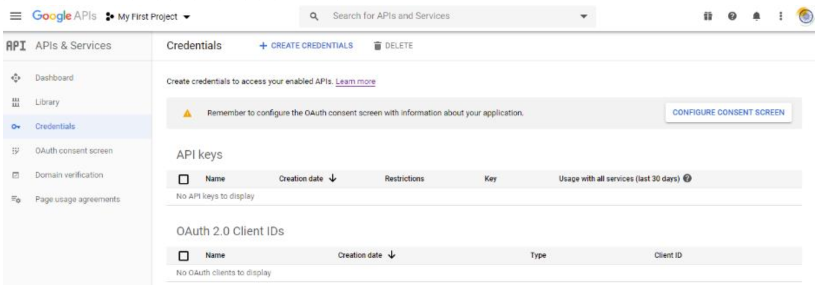


3. Google Account:

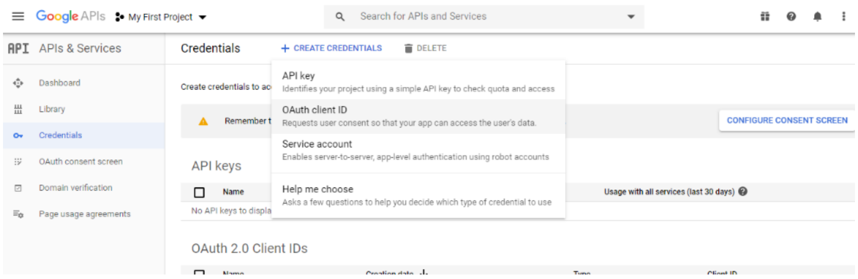
a. https://console.developers.google.com/
b. Login / Signup with Google account
c. Create New project



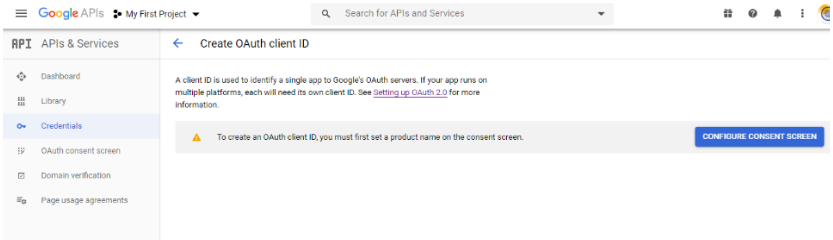
c. Credentials --> Create Credentials



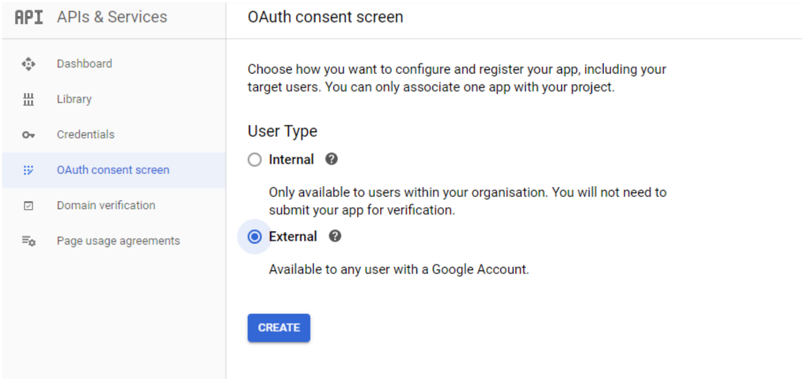
d. Choose OAuth client ID



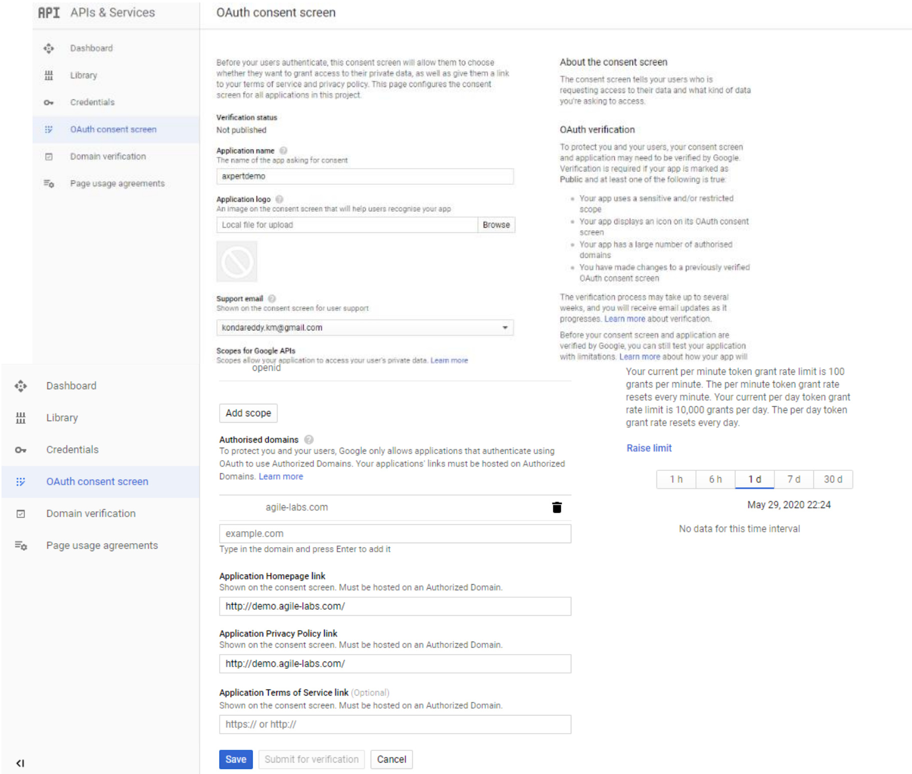
e. Configure consent screen



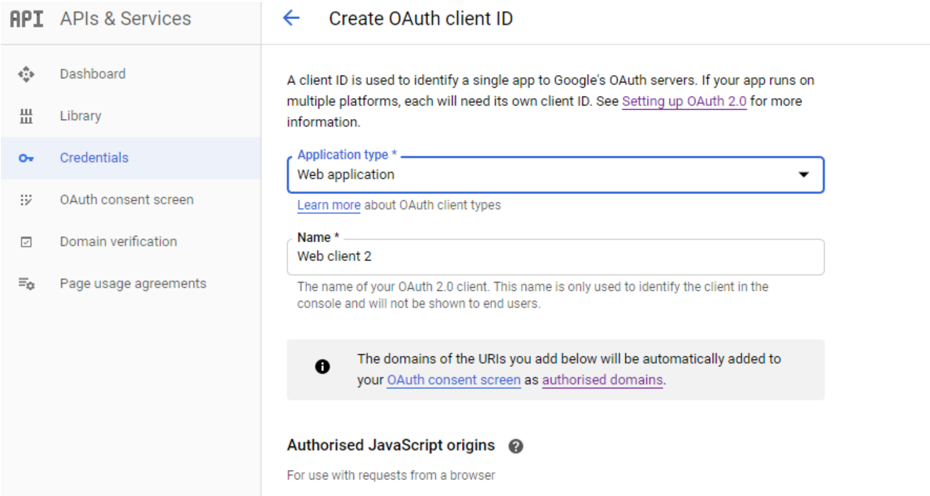
f. Choose Internal / External



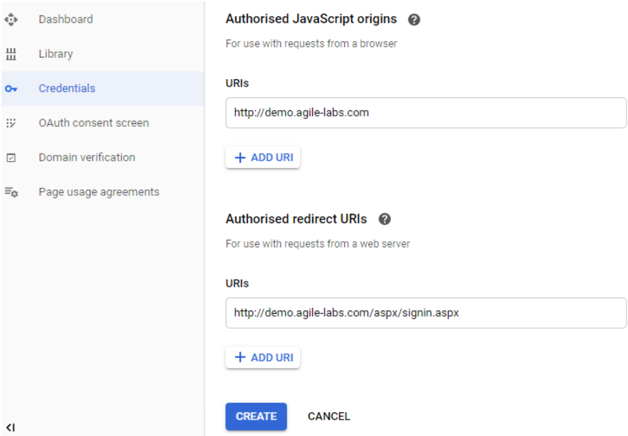
g. Application Name, logo, email, add scope if required more, application home page url and Save



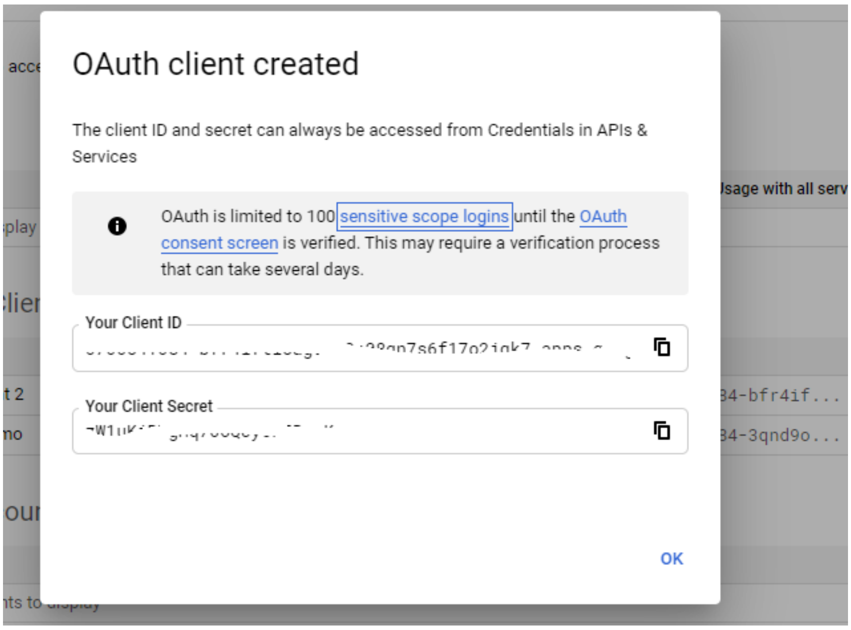
h. Select Credentials -- > Create Credentials --> OAuth client ID --> Select Application Type as Web Application



i. Add URIs & Authorised redirect URIs and Save

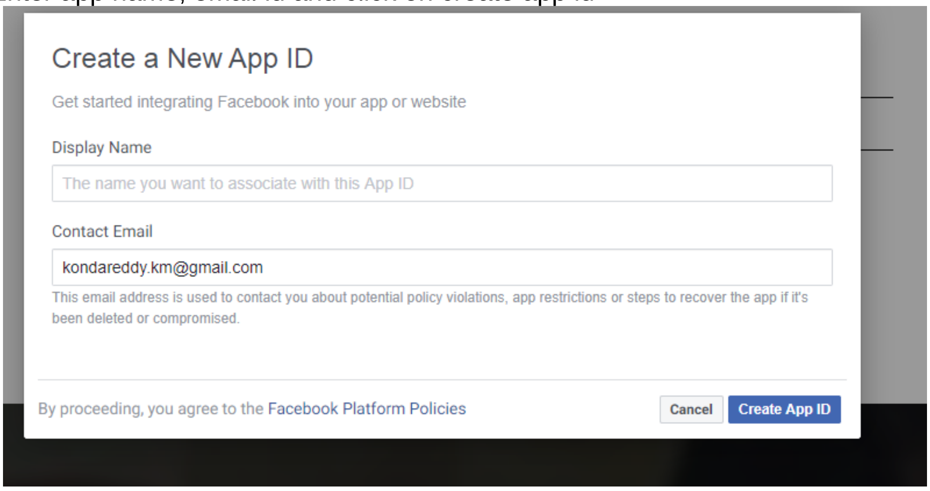


j. add these Client ID and Secret key in web.config

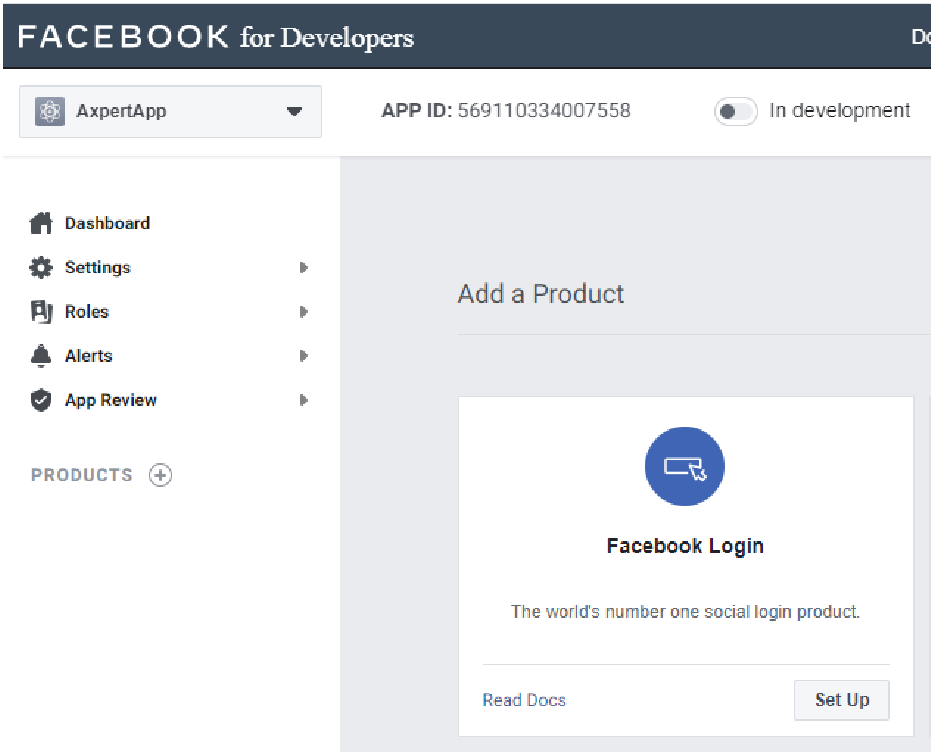


4. Face book:

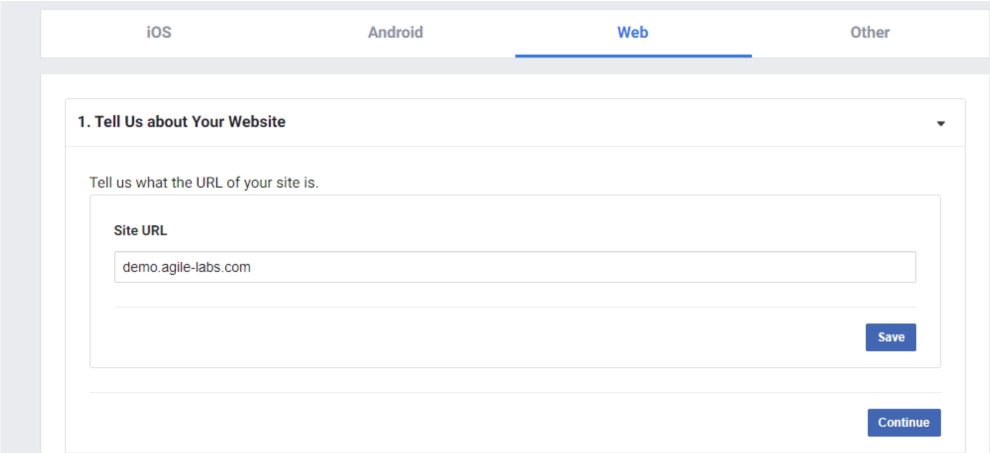
a. https://developers.facebook.com/
b. Login/ SingUp with facebook
c. Create App in My Apps
d. Enter app name, email id and click on create app id



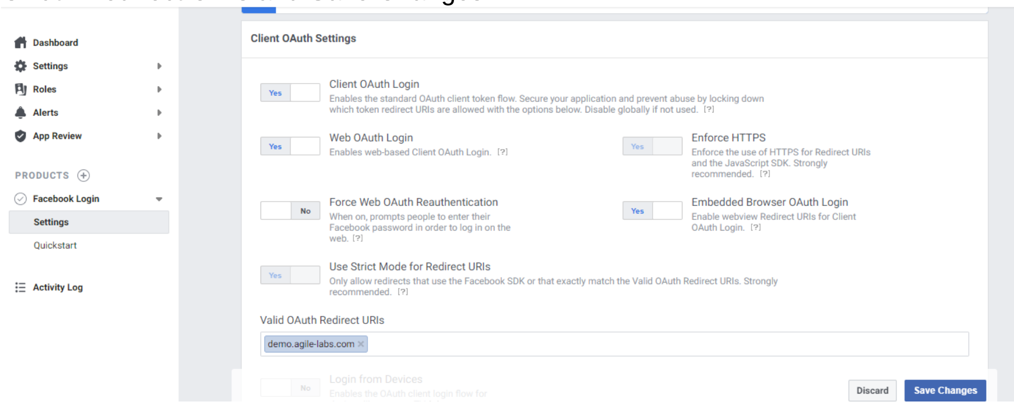
e. Set Up facebook login



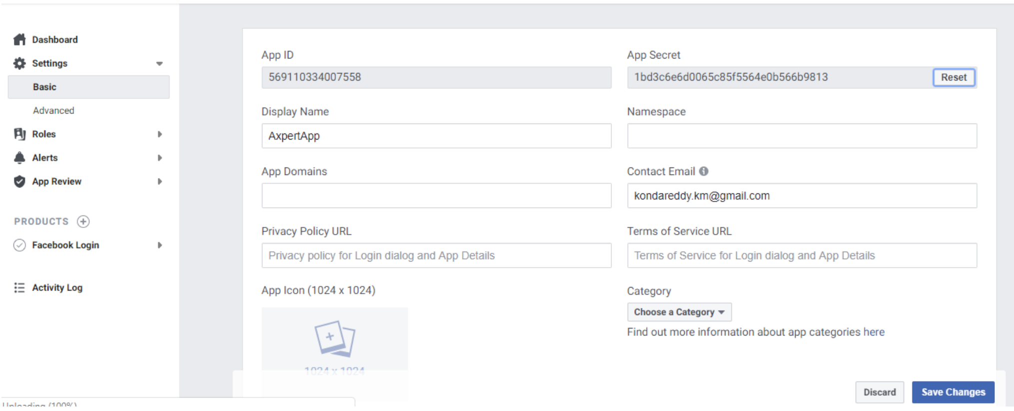
f. Choose WEB and give Site URL and save and continue



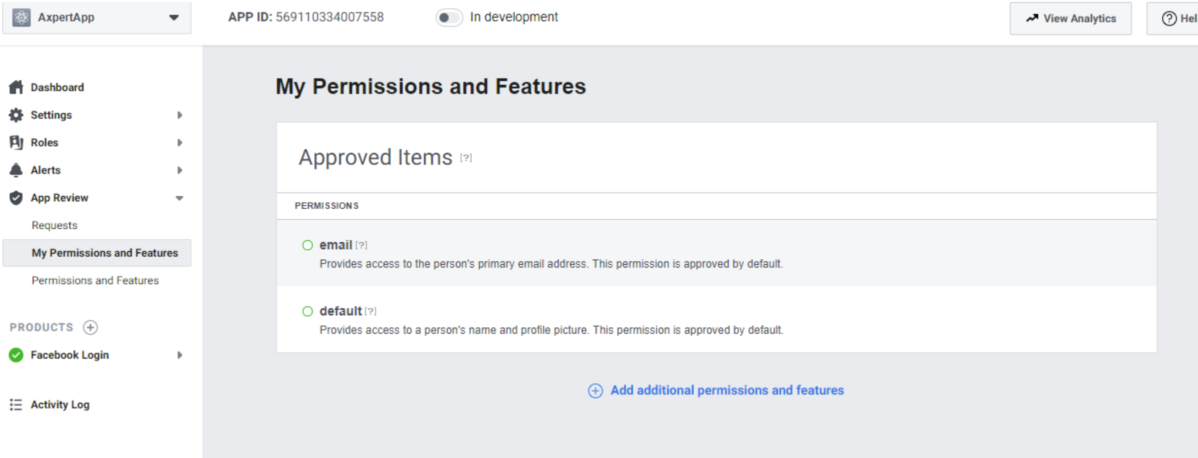
g. FaceBook login settings --> Enable Embedded Browser OAuth Login & give a valid OAuth Redirect URIs and Save Changes.



h. Settings --> Basic --> Copy App ID & App Secret keys and add in web.config in the webcode

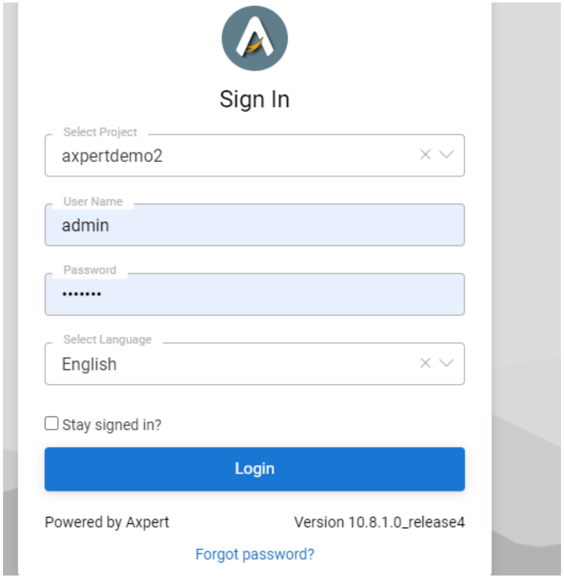


i. My Permissions and Features --> Email & Default -- incase app not work these permissions shold be enabled.



Stay Sign in

Stay signed in has introduced in the product, to enable checkbox of stay signed in in sign in page below web.config key should be enabled with value as "true"



Key:

- `<add key="staysignin" value="true" />`

Strong password policy

Strong password policy details with alphanumeric, contains one Upper Character, one Lower Character with atleast **one special character can be enabled by adding Developer Option "**`Enforced Strong Password Policy`**".**

Auto Hide Menu After Login

Menu can auto hide after login by adding Developer “`Show Application Menu on Login`” as false.

User Manual

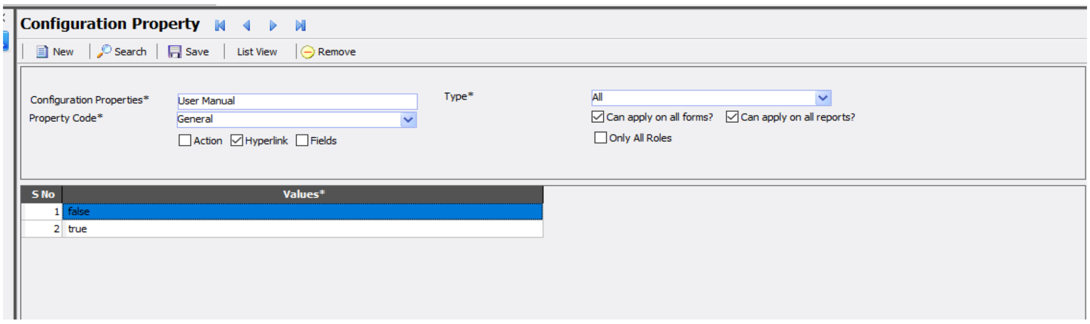
User Manual option can be enabled by adding Developer Option "`User Manual`" as true.

Intro of the feature:

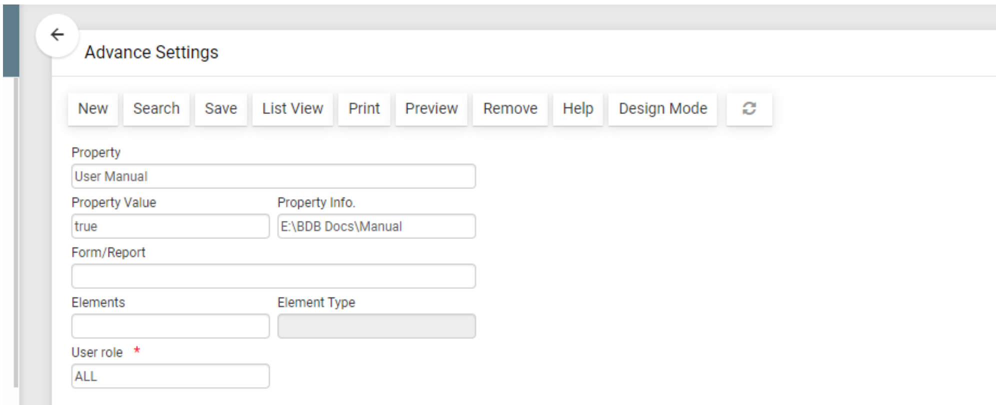
User can able to access the files through web application which is saved in local folder through User Manual option (located in right sidebar menu).

Steps to enable this feature:

1. Define one new key as "**User Manual**" in **Configuration Property**.



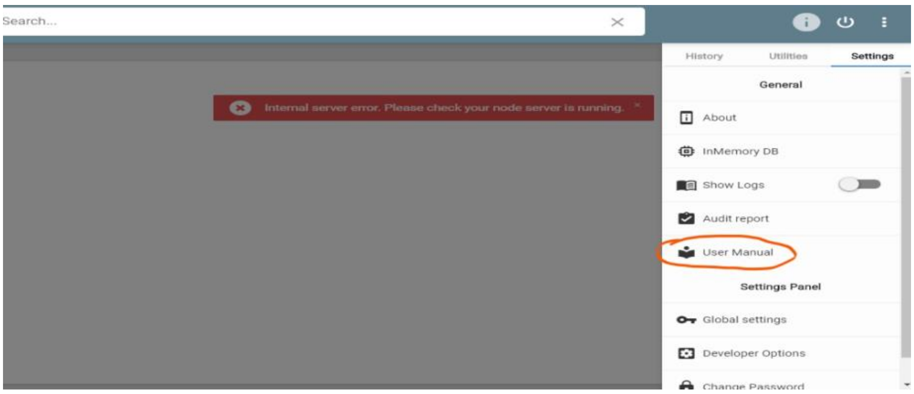
2. Go to **Developer Options** and select the **Property** as User Manual ,**Property Value** as true and in **Property Info** field you can give the folder path which folder user want to access.



3. If the path has not given **Property Info** field, then it will access the files from **default folder** i.e "[\\WebCode\CustomPages\userManual](\\WebCode\CustomPages\userManual)" .

Functionality of this feature:

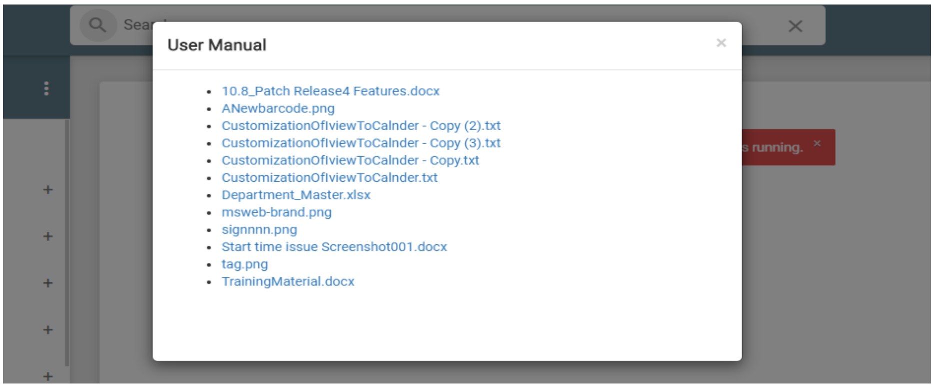
1. If the **Property Value** is set true, then in right sidebar menu one option will be available as "User Manual". From where user can able to view the list of files.



2. If the **Property Value** is set false, then It will not display User Manual Option in right sidebar menu.

3. Inside **Property Info** field, if user has given any path then it will take that path and listed all the files in User Manual popup.

If the path is not given then it will take the default folder path which is "**\\WebCode\CustomPages\userManual**" and listed all the files of this folder in User Manual Popup.



4. By clicking on the filename User can able to view the file.

Auto Save Draft Enhancements

1)Add key in advance settings with key name: Auto Save Draft
2)set key value to true and time in millisecs(for ex for 60 secs give 60000)
3)default time will be 120 seconds/2 minutes if no time is set
4)on loading tstruct,it will check if unsaved data is there, if exists it will throw a popup with yes /no buttons
5)if yes, it will load the unsaved data
6)if no, it will load a new tstruct.

Note: when a new tstruct is opened for which key is set in developer options, data will be pushed to in-memory only if at least one field is changed.

Hybrid Application

Android & IOS Geolocation based on Configuration

Precise Geo Location can be enabled for hybrid application while adding Hybrid Application as "`Need Location Details?`"

Enable/Disable the keyboard for autocomplete fields

Autocomplete fields can have keyboard enabled/disabled by setting Developer Option "`Show keyboard in Hybrid App`"

Customization

Axpert interface page for Simple way of Customization

Various WebMethods are introduced to consume for custom pages like:

- GetGlobalVar
- TstructSaveData
- GetWidgetData
- GetIViewParams
- GetIViewData
- etc.

Custom HTML on TStruct

HTML for TStruct can be completely changed to achieve completely different user interface by following steps:

- Go to TStruct design mode and click on HTML (new button introduced) button
- Left is the existing HTML and copy and modify & past in right side and click on ok button, then it will save in the DB
- After that open/load the TStruct these HTML will be affected in run mode.

Custom Css And Js file load without changing Product Code

- Custom JavaScript:
    - Property code: 'Custom JavaScript'
    - Property name: 'Custom JavaScript'
    - Property value: 'true' / 'false'
    - Form/Report: Can be All Reports/Forms or choose single report/form
    - User Role: Can be All or Role wise
    - Description: Use this property to attach custom javascript to Reports/forms. Set this property value to "true" for a selected report. If this property is set to true, the custom javascript file
        - Reports should be saved into the web root\<ProjectName>\report\js folder. The file name should <reportName>.js. In case this property is set to true for all reports instead of a selected report, the file name should be custom.js
        - Tstruct should be saved into the web root\<ProjectName>\tstruct\js folder. The file name should <tstructName>.js. In case this property is set to true for all tstructs instead of a selected tstruct, the file name should be custom.js
- Custom CSS:
    - Property code: 'Custom CSS'
    - Property name: 'Custom CSS'
    - Property value: 'true' / 'false'
    - Form/Report: Can be All Reports/Forms or choose single report/form
    - Description: Use this property to attach custom CSS to Reports. Set this property value to "True" for a selected report. If for report this property is set to true
        - For Reports the custom CSS file should be saved into the web root\<ProjectName>\report\js folder. The file name should <reportName>.CSS. In case this property is set to true for all reports instead of a selected report, the file name should be custom.CSS.
        - For Tstructs the custom CSS file should be saved into the web root\<ProjectName>\tstruct\js folder. The file name should <tstructName>.CSS. In case this property is set to true for all tstructs instead of a selected tstruct, the file name should be custom.CSS.

Landing Page HTML

Landing Page can be set for an application based on following web.config key as true. If user want load project wise html also there. the file name should be as project name:

- <add key="landingPageHTML" value="true"/>

Project Wise Main Page Template

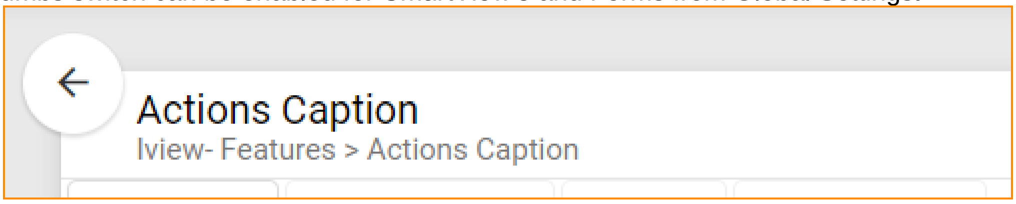
Project wise Main Page Template feature can be enabled by adding following in web.config as true, this template will be automatically loaded from “**CustomPages**” directory with filename as `<project name> + "-MainPage.html"`
<add key="AbMainPageHTML" value="true" />

Application Level Compressed Mode

Compressed Mode is made default for Application UI and SmartView's, this can be overridden from Settings Panel by enabling Modern UI Switch.

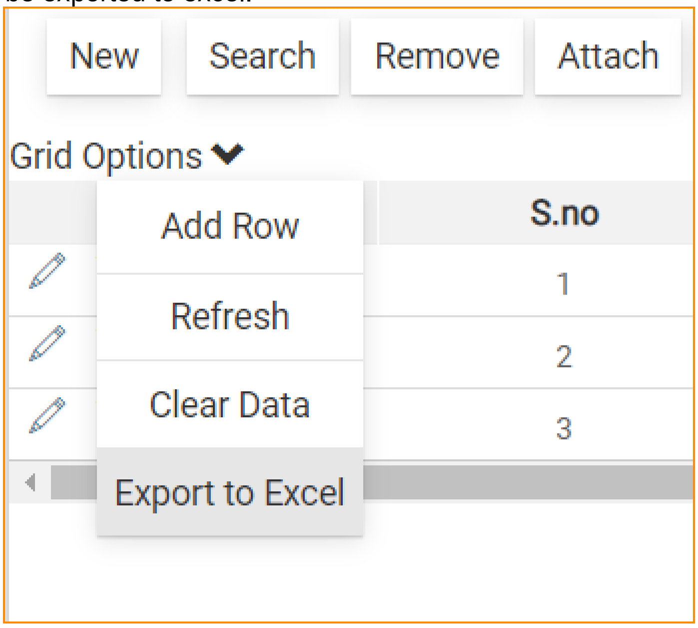
Breadcrumb Title

Breadcrumbs switch can be enabled for SmartView's and Forms from Global Settings.



Export to Excel option in TStruct Grid

TStruct Grid can now be exported to excel.



Chapter 5. What's New in 10.8?

Note for upgrade

When upgraded from a lower version, the following change needs to be done in web.config

- Open web.config file from the root directory of Axpert. This is the folder where Axpert dot net is installed.
- Remove the XMLNS attribute from configuration element. This element can be found in the first line of web config.

Features & Enhancements

AES Encryption

Passwords can now be encrypted using AES algorithm and stored in database. This can be enabled by enabling the property "Apply advanced encryption standard on user password". This property is availabe under "User Access & Passord policy setting" in property window in Axpert Desktop.

HTTPS support

The home page & widget builders did not support HTTPS in earlier versions. This version can be deployed in HTTPS environment.

Slick home page

Home pages can now be made to look more attractive by setting on the "Slick group" attribute. This attribute is available in the page property sheets in page puilder This will group KPI, Charts, Tables and make them look attractive. This option is now available when page layout is basic.

Attachments

Forms can now have a field to upload attachments. This field will allow users to upload one or more documents remove and change them. To create a field to enable users to upload attachments, the field name should be prefixed with "axp_nga". This feature is now enabled only Axpert Web and not available in desktop. The attachments will be stored in file servers and not in database. The path in which the file will be stored can be specified using application variables **AxpImagePath**. The file server URL or server name can be provided in **AxpImageServer**.

File download feature in Reports/IViews

Files can be downloaded from lists (defined as IViews). To enable this feature in an IView, introduce a column in the iview named "**axp_attach**". This column should have the complete file path along with file name. On click of the link, the file will be downloaded.

Attachments made ithrough fields in forms/tstructs have to be downloaded. To do this add columns **transid**, **fieldname** & **recordid**. These columns should contain the tstruct name, field name & record id of the transaction. The contents from the given field and record will be shown in the "axp_attach" column. Users will have options to download by clicking on any file that is displayed in the "axp_attach" column.

Work flow

A new attribute named "**From Mail Id**" is introduced in work flow configuration. Axpert will send mails to users for doing approvals. By default, these mails will be sent from the originating users mail id. This can be changed by providing a mail id in this attribute. Now, user orgranizations could have a common mail id to send mails from Axpert.

Grids as a frame

Set **TStruct Grid Edit** property to form. This property can be set through Advanced configuration. It can be set for any form or all forms. In this mode, grids in forms will be shown as non grid with options to add rows, remove rows and navigate through them.

Multi select fields

Selection or drop down fields in tstructs/forms allow user to choose only one value. There may be need for user to select multiple values. To enable this set the property "Multi Select Field" to true. This property can be set through advanced configuratot. The multiple values selected by user will be set as the field value. The values will be delimited by comma. The delimter can be changed to any other character by setting it in the "Property Info" attribute fielld in the advanced configurator.

The dropped down values may be grouped. Users can then select one or more values from each group. This will be useful in making complex user selection that may be used to describe data more accurately.

Grouped selection is enabled by providing the following columns in the SQL result for the drop down field

a) Mslist – This column will contain the dropped down values that will be displayed for user selection.
b) Groupby – All dropped down values that should be grouped and shown under one heading in the drop down seleciton window will contain the same value in this column.
c) GroupOrder – This specifies the order in which the groups and its elements will be displayed in the selection window. Lowest value first to the highest value.
d) Selected – This can be set to true if the value should be selected by default in the drop down selection window.

Example : Consider an SQL result as below

Mslist	GroupBy	GroupOrder	Selected
Red	Color	1	F
Blue	Color	1	F
Black	Color	1	F
XL	Size	2	F
L	Size	2	F
M	Size	2	F
S	Size	2	F
Cool	Style	3	F
Slim	Style	3	F
Bold	Style	3	F

The selection window will appear as below

Color	**Size**	**Style**
☐ Red	☐ XL	☐ Cool
☐ Blue	☐ L	☐ Slim
☐ Black	☐ M	☐ Bold
	☐ S	

Locations and maps in Forms/TStrcuts

The latitude and longitude of the device in which data is enterd can be captured into fields in forms. Add fields named **"Latitude"** and **"Longitude"**. These fields will be automatically filled with current lat and long.

To display the location on a map, introduce a field named "LatLongMap". The field type should be text area. This will work only in non grid DC. The map will be displayed in this field with the lat and long pinned on the map. This needs to be integrated with google maps to work by providing the google map API key. This can be provided in advanced config.

Select the property name as “Google Map API Key” for this form. Set the API key value in property info. The property value should be set as “General”.

Chapter 6. What's New in 10.7?

This chapter provides more information on features and enhancements made in 10.7.

Sections of this chapter:

- Features

Features

This section provides more information on the features available in 10.7 release.

User interface

The user interface of the main page is standardized using material design. This version has been simplified to user convenience.

Mobile Compatibility

Axpert is now fully compatible with mobile and can be easily accessed from either mobile browser or Axpert Hybrid mobile app. You can also access into Axpert mobile application in few seconds. So now in this version Axpert is more compatible with mobile.

List views

List views now have features to sort, search, filters same as smart views. Users can now sort and search lists just like any report or view. It now has an inbuilt charting option.

In memory database

Keys are now listed based on forms and reports. So, users can clear the keys related one or more related forms or reports. When changes need to be applied to a form, the keys related to only that form can be cleared instead of clearing all keys from in memory. This version has simplified the in memory database by providing the keys based on forms and report.

Grids in forms

Grids in forms are now having a new look with optimized space utilization. This enables users to see more rows in the screen without having to scroll. So, this version has optimized space utilization.

Chapter 7. What's New in 10.6?

This chapter provides more information on features and enhancements made in 10.6.

Sections of this chapter:

- Features
- Enhancements

Features

This section provides more information on the features available in 10.6 release.

Axpert on PostgreSQL

Axpert is now compatible with postgreSQL database as it is one of the powerful opensource databases providing responsive framework. This database is highly reliable, robust and offers a great performance.

Use Axpert in mobile

You can now view all your Axpert Web applications in mobile. This version of the app offers a simple and intuitive user experience and is highly scalable and globally available. You can sign-in to your Axpert application in few seconds and connect to your enterprise on-premises or cloud resources to digitally manage and report the operational data in the mobile app**.**.

Enhancements

This section provides more information on the enhancements made in Axpert 10.6 release.

Optimizing Axpert Performance

Performance improvement, by nature, is iterative. In this release, the concept of postback is removed for **New**, **Search** and **Save** buttons on the forms. Let us consider a scenario of opening an existing form from the menu or from the search bar. Once the form is loaded, click the **New** button to open a new form. Axpert now clears data in the existing form and just loads a blank form instead of reloading a new form. This approach not only loads the form instantly, but has also improved the performance of the Axpert to a greater extent.

(Note: Axpert loads the new form only when you try to open it from the menu or from the search bar or from the list view.)

Handling US date format elegantly

Axpert now supports mm/dd/yyyy (01/05/2010) format in addition to dd/mm/yyyy (05/01/2010) format. You can configure your date format using **Date Format** property under **Advanced Settings** option. After enabling this setting, Axpert displays the date in mm/dd/yyyy format across date fields throughout the application.

AxpertWeb security enhancements

This topic provides more information on how to protect your website/server against various malicious attacks:

(i) **Cross site scripting (XSS) -** This is a code injection attack from the client side. This type of attack occurs when the victim visits the web page or web application that executes the malicious code. Such attacks are common in forums and message boards that prompts you to enter comments.

(ii) **SSL cookies without secure flag set -** When you set a secure flag on cookie, browsers do not submit the cookie in any requests that uses an unencrypted HTTP connection. This prevents the attacker to perform the attack. You can set the secure 'httpCookies' flag in web.config file following path '//configuration/system.web/' as <httpCookiesrequireSSL='true/>.

(iii) **OPTIONS Method Enabled** - This provides the list of methods that are supported by the web browser allowing attackers to intensify their efforts. It is recommended to disable OPTIONS Method on the web server. You can disable this method in web.config file in following path '//configuration/system.web/' by adding 'authorization' as <authorization><deny verbs="OPTIONS" users="*"/><deny verbs="TRACE" users="*"/><deny verbs="HEAD" users="*"/></authorization>

(iv) **BREACH attack** - This is basically an attack against HTTP. This attack can hack the sensitive information in as little as 30 seconds. To prevent hacking the sensitive information, turn off HTTP compression in IIS. To disable HTTP compression, refer to https://docs.microsoft.com/en-us/iis/configuration/system.webserver/httpcompression/ or http://dotnetmentors.com/aspnet/how-to-enable-http-compression-in-asp-net-website.aspx.

(v) **RC4 cipher suites detected** - This attack is against TLS that allows an attacker to recover a limited amount of plaintext when RC4 encryption is used. To counteract this attack, stop using RC4 in TLS. For more information on how to disable RC4, refer to https://docs.microsoft.com/en-us/windows-server/identity/ad-fs/operations/manage-ssl-protocols-in-ad-fs#disable-rc4.

(vi) **Disclosure of webserver version** - Web server often displays what type of server it is, its version no. and the operating system. Attackers use this information and exploit the target web server. It is therefore recommended to limit the information displaying on the server.

(vii) **Application error message** - These messages may expose sensitive information about an application's internal workings to an attacker. To avoid this attack, configure your application properly to log errors to a file and redirect to custom error pages, so configure paths properly in httpErrors and customErrors with mode='On'.

(viii) **Unencrypted login request -** Unencrypted Login Request is stealing the user credentials such as usernames and passwords that are sent unencrypted to the server for the request. To prevent hacking the credentials, use Secure Socket Layer (SSL).

(ix) **Missing or insecure content-security-policy (CSP) header** - CSP is an additional layer of security that is used to prevent XSS and data injection attacks.To enable this header, goto **//configuration/system.webServer/httpProtocol/customHeaders** path and add the following syntax: **<add name="Content-Security-Policy" value= "script-src 'unsafe-inline' 'unsafe-eval' http: https:; style-src 'self' 'unsafe-inline'; font-src *;img-src * data:; default-src *;" />**

For more information on additional settings, goto https://www.sitepoint.com/improving-web-security-with-the-content-security-policy/

You can also verify CSP settings in https://csp-evaluator.withgoogle.com/

(x) **Missing or insecure "X-XSS-Protection" header** - Sometimes browsers, such as Internet Explorer, chrome and safari, prevents loading the page when they deduct XSS attacks. To automate this process, goto**//configuration/system.webServer/httpProtocol/customHeaders/** path and use the following syntax: **<add name="X-XSS-Protection" value="1; mode=block" />**

Chapter 8. What's New in 10.5?

This chapter provides more information on 10.5 features.

Sections of this chapter:

- Smartviews
- Creating online forms
- Axpert Package Manager
- Wizard based DC

Features

SmartViews

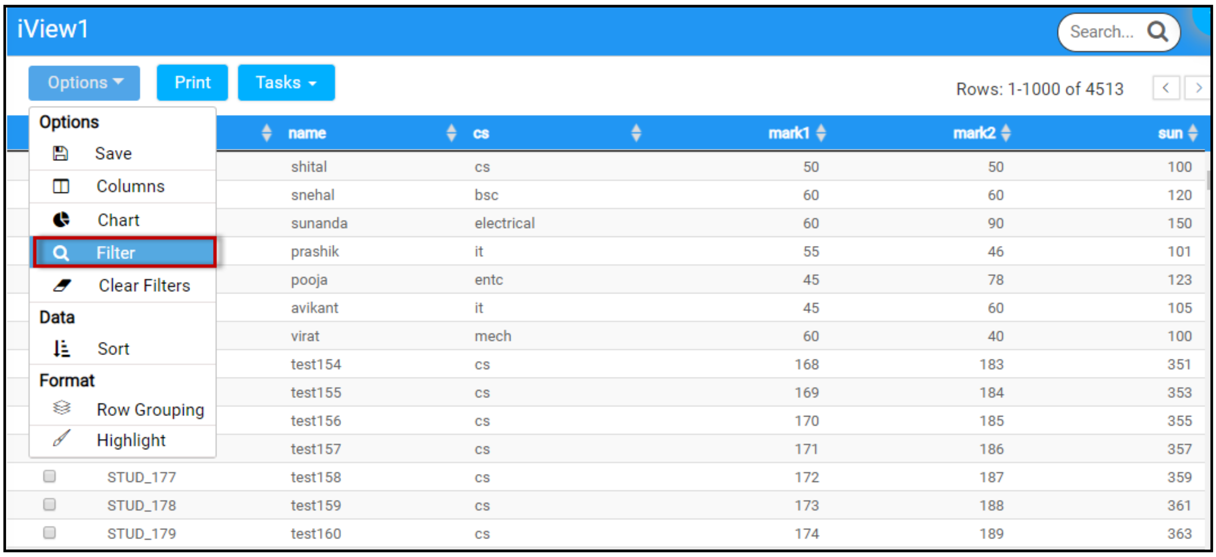
Smartviews are the revamped version of iviews. You can now view any reports in smart views, that has an attractive user interface design allowing users to perform the following functions:

- Creating filters
- Grouping
- Sorting
- On the fly formatting and so on.

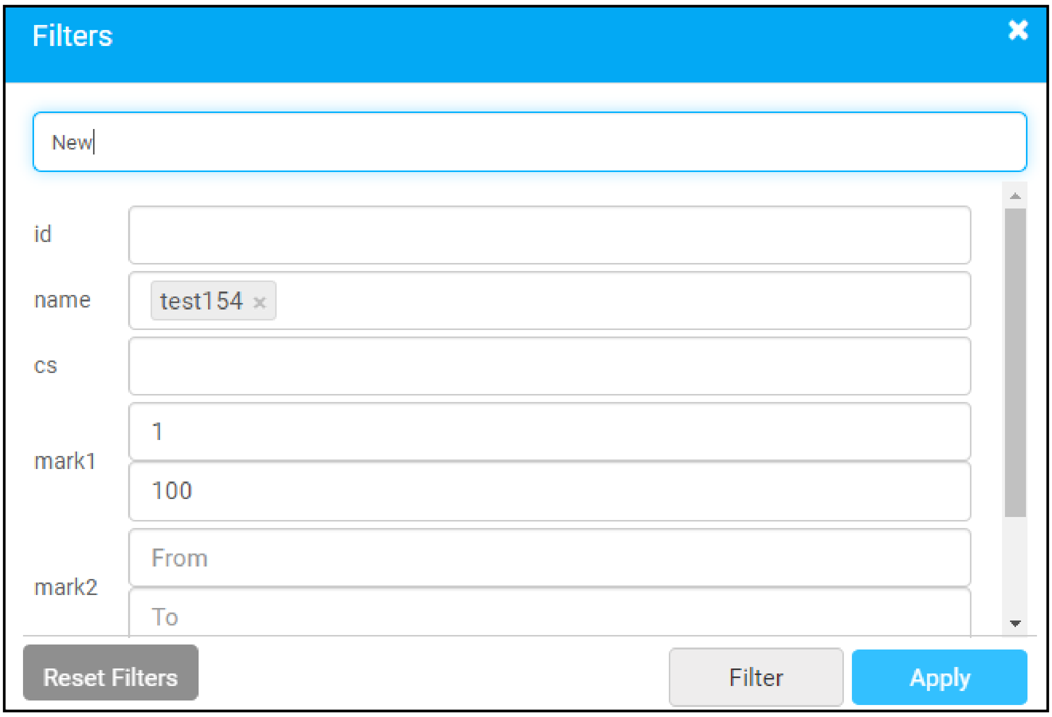
Using filter option, you can customize the visibility of your reports by creating a filter, which screens the data that the report brings back from your datasource. You can generate a custom report by picking selected report columns. The introduction of Dynamic expandable search bars with the magnifying glass icon acts as an effective space saver and provides an effective UX. This search bar is a retractable textbox that expands on hovering/clicking and retract back when the interaction with the search bar ends.

How to use Filter option in Smartviews?

1. Open any report.
2. Navigate to the **Options** drop down as shown below to open **Filter** window.



3. In the **Filters** window, enter values in the selected field columns for which you wish to create a filter and click the **Create Filter** button.



The created filter appears as shown below.

Records in the report appear according to the filter.

How to group Rows in a report?

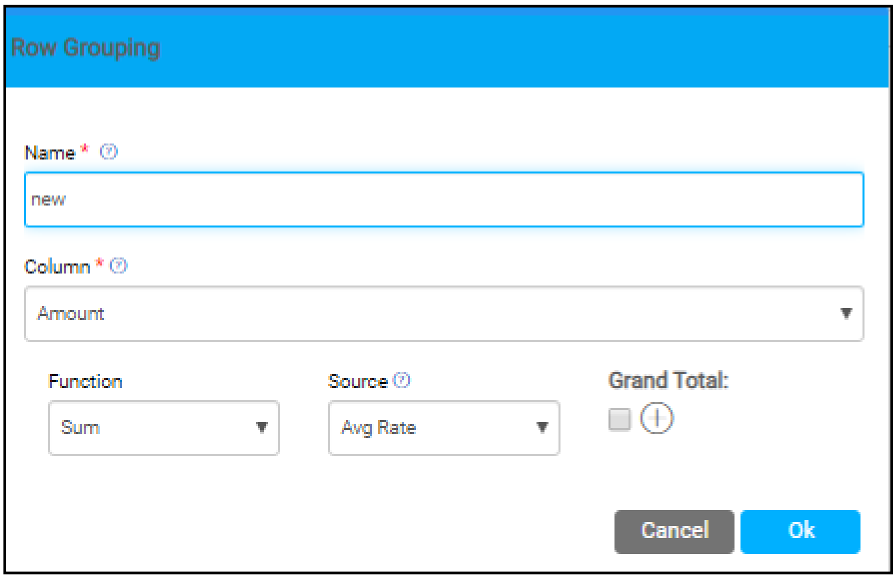
To perform row grouping, follow the steps mentioned below:

1. Navigate to the **Options** drop down in a report and click **Row Grouping** option.

2. In the **Row Grouping** window, enter a name to create a new group.

3. In the **Column** drop down, select the columns that you wish to perform row grouping.

4. In the **Function** drop down, select one of the arithmetic functions to be performed on the selected column.



5. In the **Source** drop down, select the column that will be used for computation.

6. Click the **Ok** button.

Creating online forms

In this release, you can now create one or more forms in Axpert web using Forms report option available under the menu. Using Custom Actions drop down in the Form Elements page, you can add various controls to the form including input fields, frames, grids, post data to other forms and update field details in other forms, so on. Each control has properties that you can set or change. Form Save option appears on the first instance while setting the basic properties of the form such as enabling workflows and list views. After the successful creation of the form, user can click Open Design Mode link under forms report to actually enter values in the form and save the details.

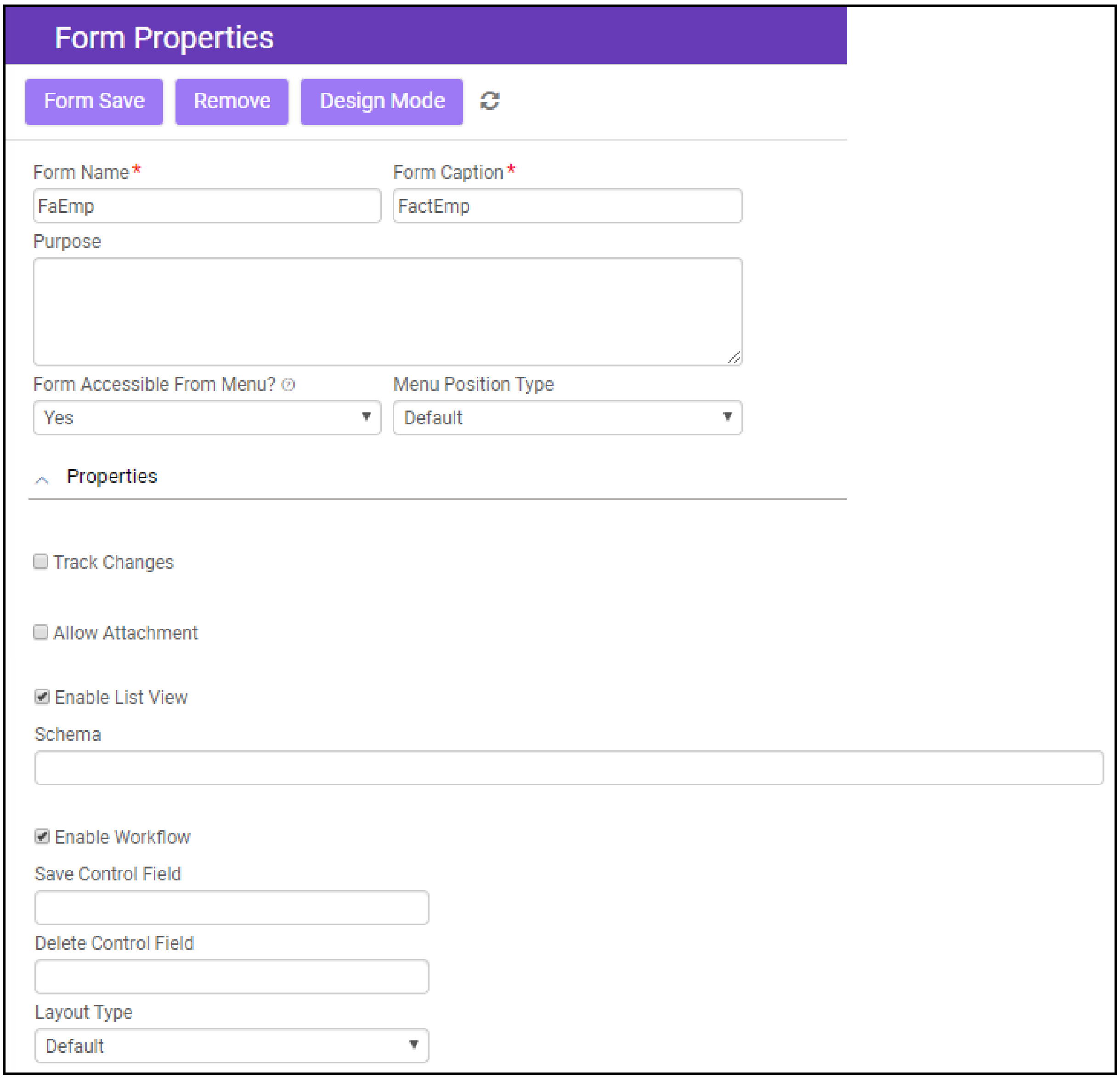
How to create forms in Axpert Web?

To create forms online, follow the steps mentioned below:

1. In the search box, type **Forms**and click . The Forms report appears.

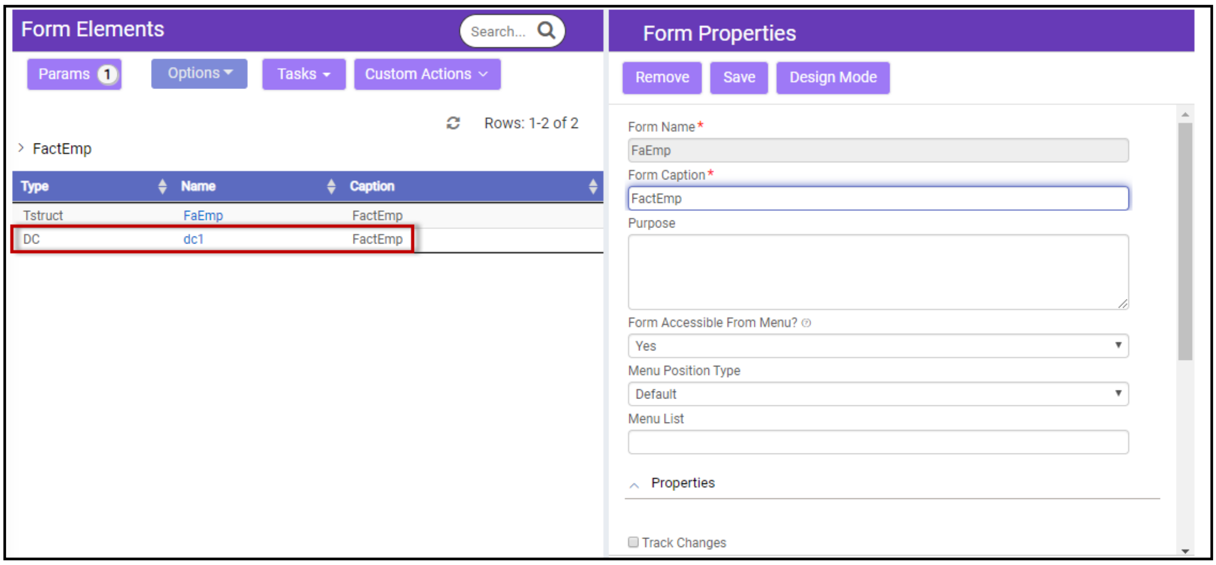
2. Click the **Create Form** button. The Form Properties window appears.

3. Fill the basic details of the form such as form name, caption, and enable the basic properties such as workflow and so on.

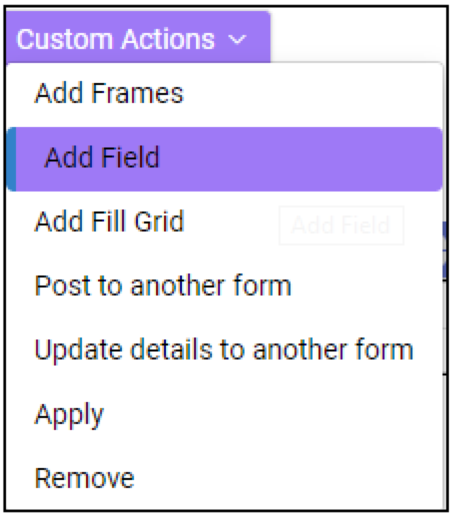


4. Click the **Form Save** button.

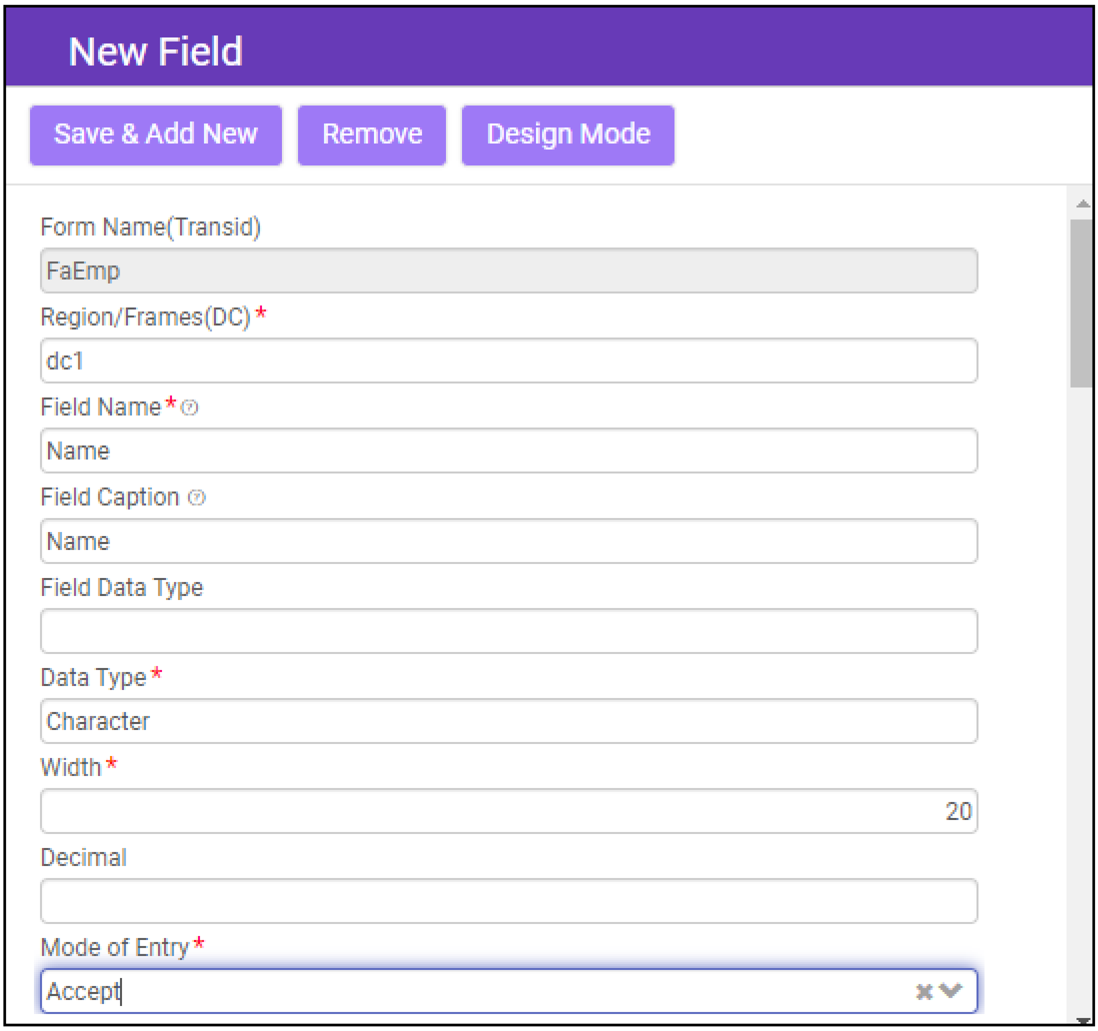
Form Elements and **Form properties** windows appear simultaneously as shown below. When you save the form for the first name, TStruct gets created along with the DC as highlighted in the below image.



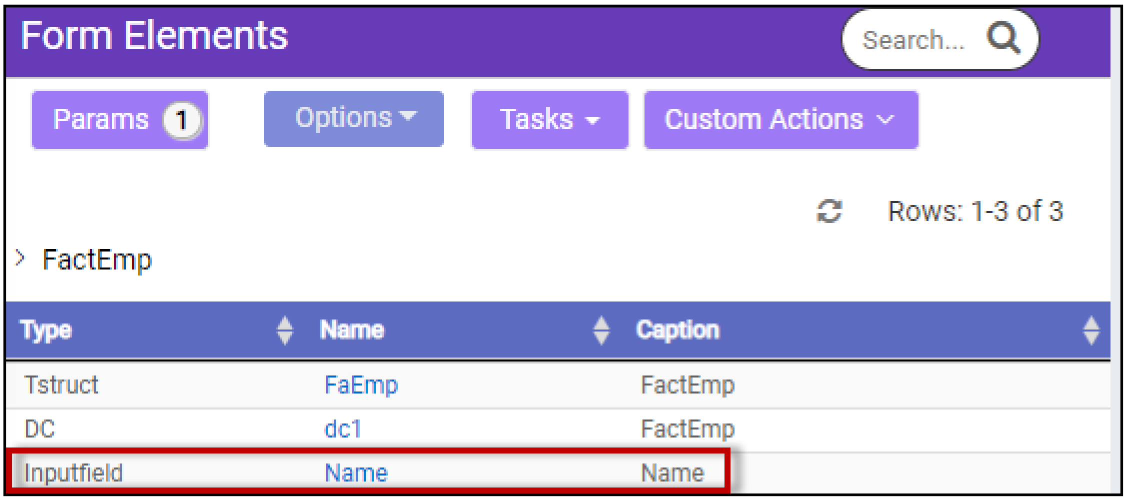
5. Click the **Custom Actions** drop down and select one of the available options as shown below: For e.g. you can select Add Field, so that an input field property window appears.



6. Enter the relevant field values in the input field and click the **Save & Add New** button.

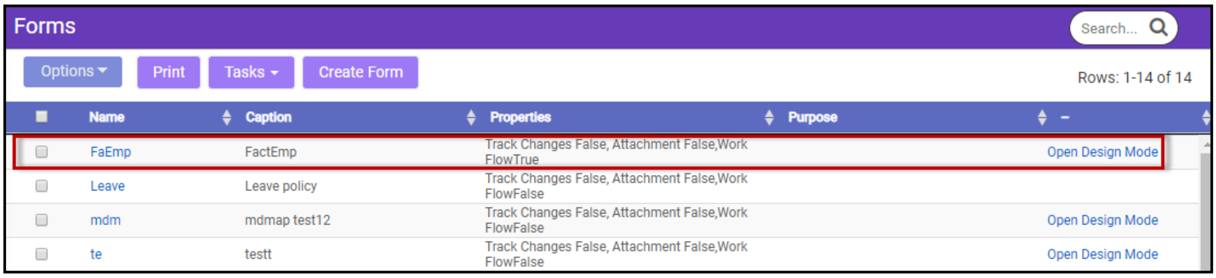


A new row of input field adds to the **Form Elements** window as shown below. Similarly, you can add the required fields to the form.



7. Click the **Save** button under **Options** drop down of the **Form Elements** window.

8. Under **Custom Actions** drop down of the Form Elements window, click the **Apply** button to save the structure. The saved structure appears in the Forms Report as shown below:



9. To navigate to the run mode of the form, click **Open Design Mode** button against the form name for which you wish to enter data.

10. Enter the data and save the form.

Axpert Package Manager(APM)

This is a windows service that runs in the web server. The folder into which this application is copied is called APM folder.This APM runs as a tray application in the windows tray.Readme.txt file displays information about the package to the user, where packages are the collection of programs or definitions. For example, a package can contain the following types of files:

- Structure files that contains forms/reports/pages definition
- SQL Scripts

This application performs the following:

- Information about the packages can be read from Readme.txt file.
- Applies package when user clicks the **Apply** button.

After applying the package, user can view the following:

- Imported structures into apps.
- Scripts that ran in the database.

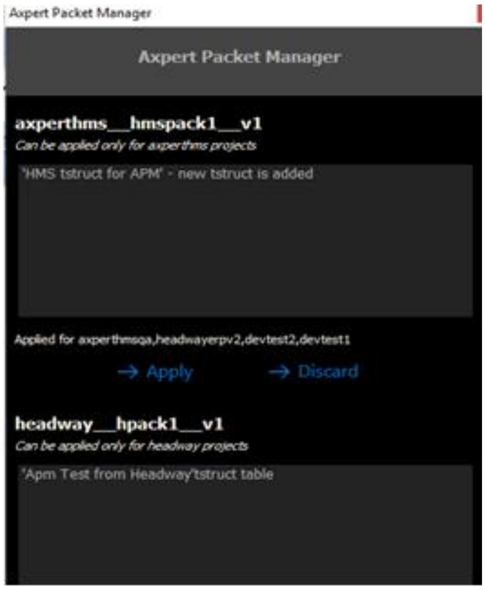
While applying a patch, these results and traces are stored under PackAppliedResults file.

Developer Notes

The **APMConfig.INI** file contains all config parameters related to APM, web server details along with the folders where web code exists, apps along with the DB connection details running in this instance.

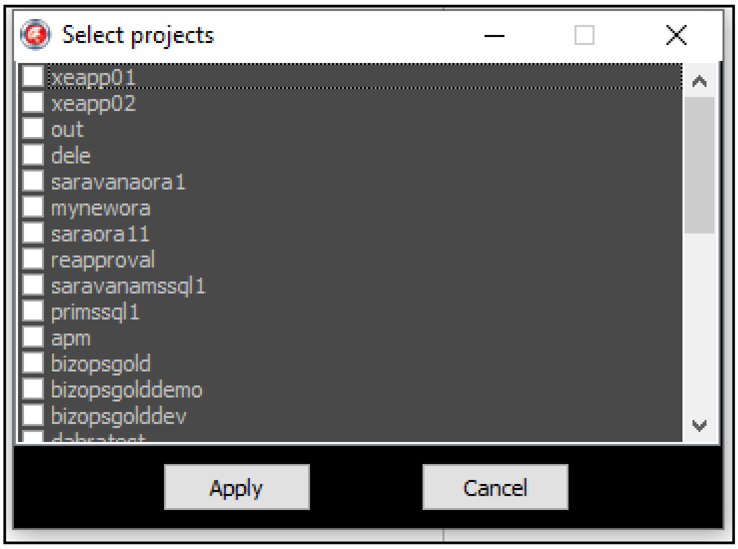
How to apply a package using APM?

1. Double click **Axpert Package Manager (APM)** icon. APM containing the package appears as shown below:



2. In the **Axpert Package Manager** window, click the **Apply** button against the packages available for download.

3. In the **Select Projects** window, select the projects for which you wish to apply the package content and click the **Apply** button.



APM imports/upgrades the definitions/scripts to the selected application given in **apmconfig.ini** file, where this file contains details of server URL.

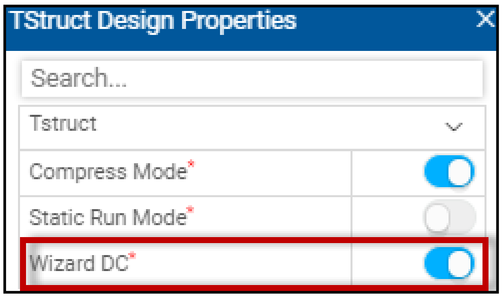
Wizard based DC

Use this feature to navigate across data containers (DC's) as an individual page so that users can pay their attention in detail for better understanding. For multiple DCs, navigations can be made using next and previous buttons. Cancel button helps users who are looking for a way out.

To enable this feature, follow the steps mentioned below:

1. Navigate to the design mode of a form and open the **TStruct Design properties** window.

2. Move the slider right in the **Wizard DC** option and save the form.



3. Click the **Run** button to view the DCs appearing as wizards.

The introduction of this feature provides a better UX for users.

Enhancements in 10.5 release

Powerful Global Search

In this release, search bar is made more powerful by adding a Global Search feature.Using this search is as easy as doing a google search.For e.g, when you search for a supplier name using this global search, all information related to the supplier appears. You can further drill down to the supplier details by clicking on the respective hyperlinks.This powerful search helps users to find information quickly. Simply entering two characters in the Search bar will show results from different records related to that keyword.

Developer Notes

The introduction of axp_appsearch view helps users to search data periodically, as and when the new menu items are added and can retrieve dynamic records.

Security Enhancement

In this release, web service methods are hidden from displaying on the service description page. For e.g., if you type http://localhost/TestService.asmx on your browser, system was displaying the list of services and was allowing to test them. Now, as a security enhancement these methods are hidden so that none off the internet will be able to call these methods. To hide the service description page, remove Documentation protocol from the list of available protocols.

Developer Notes

The below sample code illustrates an e.g. of removing the documentation protocol.

```
<webServices>
   <protocols>
     <remove name="Documentation"/>
   </protocols>
```

</webServices>

Chapter 9. What's New in 10.4?

This chapter provides more information on 10.4 features.

Sections of this chapter:

- Collapsible sidebar navigation
- Split window
- Advanced Settings

Features

Collapsible sidebar navigation

You can now view the menu as a fixed positioned scrollable sidebar, which means the sidebar is fixed in place as you scroll down the page. This sidebar provides a more concise design with expandable/collapsible sections as it can handle couple of levels. You can expand/collapse menu items using Menu icon. The colorful icon against each menu item improves the look and feel of the application drastically.Additionally, previous and next buttons are placed for opening the recently closed items. The introduction of refresh icon refreshes the sidebar menu with the newly added forms/reports to the application, thereby avoiding the session logout.

Split Window

Any forms/reports in Axpert are associated with hyperlinks. Using this feature, you can now split any individual forms/reports vertically or horizontally. This enables user to view more data in a single page without actually navigating it to a new page. The user can split a page by clicking on the split button on the right top corner or on the left bottom corner of the client area.

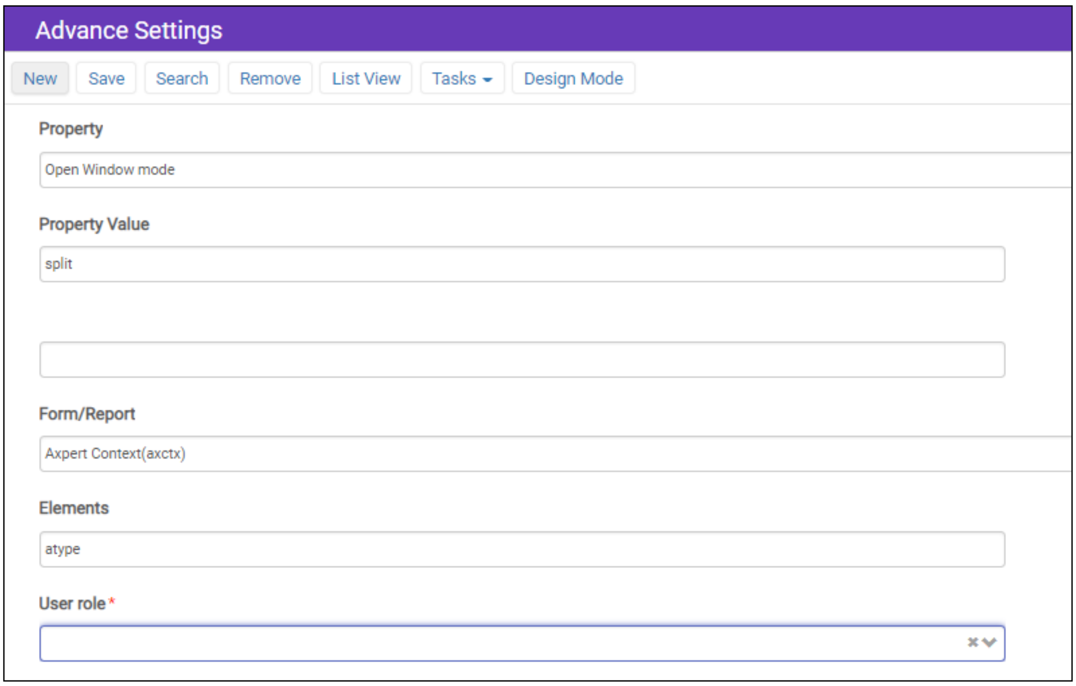
Advanced Settings

In this feature, you can control the display of forms/reports available in the application using Advanced Settings option.

Navigation

To access the Advanced Settings window, navigate to the **Settings** icon on the right corner of the client area and click **Advanced Settings** option.

The Advance Settings Form



<table>
<tr><th>Field</th><th>Description</th></tr>
<tr><td>Property</td><td>Use this field to select a property. The following values are available to select:

Align Text–Select this option to align the text left or right.
Change Password – Select this propertyto decide whether the change password option must be available or not in the application.
This property is mainly used for Agilecloud.
Disablesplit – Select this option if you wish to disable split for specificforms and reports or for the entire forms and reports in the application.
Fetchsize– Select this option to decide the no. of records that has to appear in a report.Navigate to the property value and select the no. of records to appear.
FormLoad cache – Select this property to cache the form load data based on global parameters. For more information on form load cache, refer to property value section.
Landing structure – Select this property to decide the landing page once you login any Axpert application. For e.g., as soon as you login to an application, you can decide what content has to appear in the landing page. The content can be either a particular form/report. After selecting the form/report, if you logout and login to the application, the selected form/report appears as a landing page.
This property is mainly used for Agilecloud.
Load forms along with list – Select this option to split the form automatically.
Load reports/lists along with form – Select this option to split a report automatically.
Main page reload–This option is dependent on the landing structure property. This property is mainly used to end the actions performed on a form.

For e.g., consider Global Parameters form as your landing structure. In that form, after performing each transaction, save the form, such as after entering the branch details, save the form. Again enter the location details and save the form.

TStruct Grid edit option–Select this option to select the type of grid that has to appear while editing the grid.
Open Window mode – Select this option to open hyperlinks in reports as a new page/popup and so on.
If you select this option, system first checks if any forms are associated with the report to open else opens the hyperlink content of the first record on the right frame.
</td></tr>
</table>

Field	Description
Property Value	Use this field to select a property value based on the selected property. The following values appear if you select the property as **AlignText**: • **Right** • **Left** The following values are available if you select the property as **FormLoad cache**. • **30 min** • **1 hour** • **2 hour** • **5 hour** • **10 hour** • **none** Based on the selected time, cache data gets updated. For e.g., if you select the time as 30min, for every 30 min, cache gets updated by fetching the latest data from the database. If you select the property value as **None**, caching will never happen. If you do not select any time limit, caching gets updated after 24 hours. It means whenever user logs into the application for the 1st time on that particular date, data gets fetched from the database and gets stored in the cache and remains same until next day 12AM. The following values are available if you select the property as Landing Structure: • **TStruct** • **IView** The following values are available if you select the property as **Disablesplit** or **Load forms along with list** or **Load reports/lists along with form**: • **True** • **False** The following values are available if you select the property as TStruct Grid edit option. • **Inline–**Select this option to open the grid in inline mode. • **Popup –** Select this option to open the grid in pop up mode. The following values are available if you select the **property** as **Open Window mode**.

Field	Description
	• **Default –** This option overrides the content in the existing frame. • **Newpage–**Select this option to open the hyperlink in reports in a new page. • **Popup –** Select this option to open the hyperlink in reports as a popup. • **Split–**Select this option to open the hyperlink on the right side in the same page. If the opened hyperlink on the right side further contains any hyperlink and if the user clicks on the hyperlink appeared on the right side, the new hyperlink content will override the existing content in the right frame.
Form/Report	Use this field to select the relevant form/report for which the chosen property has to applied. If you wish to apply these settings to the entire forms in the application, choose **All forms** option. If you wish to apply these settings to the entire forms in the application, choose **All reports** option.
Elements	Select this only if you are using Open Window mode.
User role	Select the role to whom these changes are applicable for.

Enhancements

Refresh Home page Data

You can now replenish your home page with the most recent Redis data. Whenever you modify any data in widgets, you can view the updated data in home page by clicking the Refresh icon against each widget to load the latest data. When you refresh a widget, the data refreshes for everyone who has access to that widget provided they reload the page to view the updated data.

By default, time for refreshing the cached widget data has been set as 30 minutes and can modify the time if required. For example, if the user makes an attempt to change the Auto Refresh time as 10 minutes or less than that, system now alerts the user by prompting a message stating “performance will be affected”.

Chapter 10. What's New in 10.3.0.1 (Patch release)?

This release provides more information on Smart Refresh feature.

Smart Refresh

This feature automatically clears the data in Redis at regular intervals. Whenever any changes are made into the source data, Redis cache gets refreshed. For example, if you are changing the source data for every five minutes, data in Redis also gets refreshed for the same time span, thereby improving the scalability of systems.

To use this feature, you must define a variable {axp_axpertlog} in the application variables screen and set its property as true and, additionally, establish a relationship between parent TStruct and child TStruct in AxRelations table. For example, define an input field in the parent TStruct (form) and create a parent dependent field in the child TStruct (form). From now on, any changes made in the parent TStruct will get reflected in the child TStruct as well and vice versa.

To disable this feature, you must add a field "axp_real_time_cache" by setting its property as {F} in the master transaction. If you set the property as {T}, then it will behave as a default auto refresh.

Chapter 11. What's New in 10.3?

- Home builder is replaced with Page builder.
- To view **Page builder** icon in your landing page, you must upgrade your AxpertWeb application from 10.2 to 10.3 through Axpert manager. For more information on upgradation process, refer to Upgrading Axpert applications to Version 10.3
- Upon upgradation, all the existing widgets until 10.2 version appears in a system created page called "home page".
- Any user associated to admin role (relevant role) can create pages and can assign the home page (backward compatibility) widgets to the respective roles and users.
- Assigning widgets according to the responsibility is removed.
- Pages gets assigned to the user based on the following conditions:

  System validates whether any page is assigned to the user. If not, it validates whether the role, to which the user is associated with, is assigned a page else the page that is set as a Default HomePage is assigned to the user.

- XML configuration for Node to retain data in dbconfig.js while updating Axpert applications.
- Tree view for reports – You can open hierarchical data as a tree in reports.
- Mapping data from one widget to another by passing parameters.
- **Dynamic widgets** – One of the powerful widgets that allows you to open any hyperlink data of a widget without actually displaying it in a new window.

Upgrading Axpert applications to Version 10.3

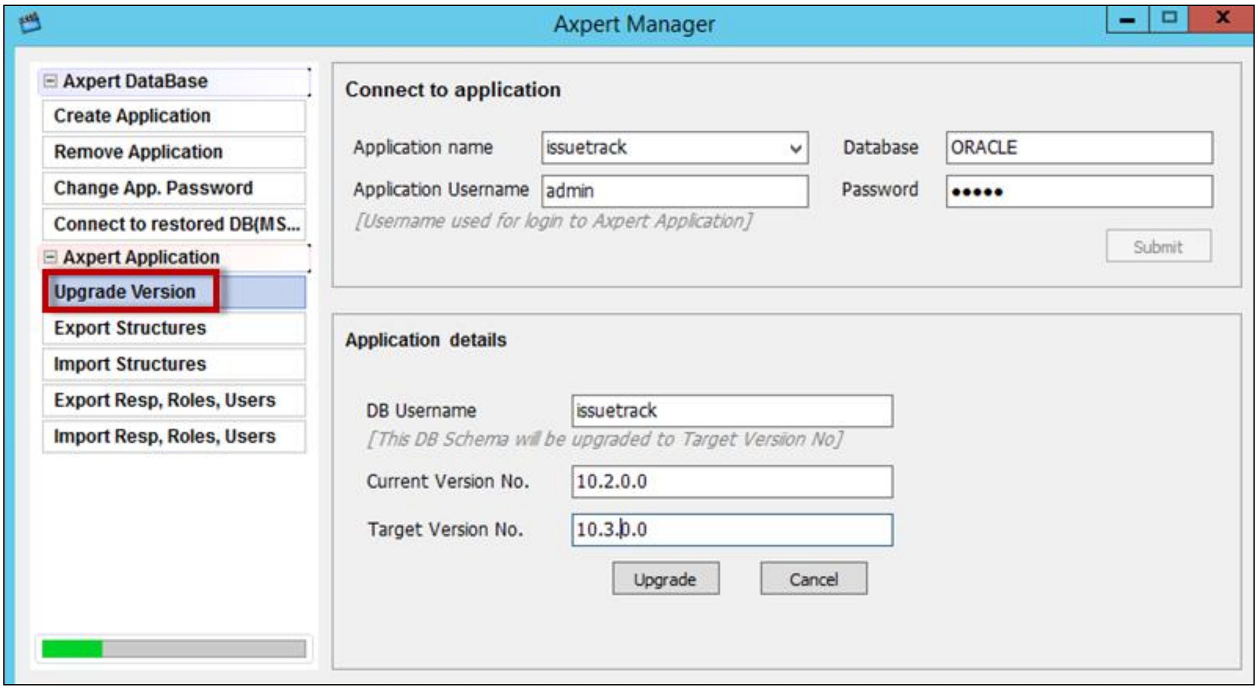
You can migrate Axpert applications from the previous releases to the latest release using Axpert Manager.

It is recommended to download the latest version of Axpert files before starting the migration process.

The following steps describe how to upgrade Axpert application from a prior release to the latest release.

1. Double click **AxpManager** application available under **AxpertWeb>AxpertWebScripts** folder. The Axpert Manager window appears.

2. On the left pane of the **Axpert Manager** window, click Upgrade Version under Axpert Application option.



3. On the right pane, under **Connect to application** section, perform the following:
   (i) From the **Application name** drop down, select the application that has to be upgraded.
   (ii) In the **Application Username** field, enter the user name.
   (iii) In the **Password** field, enter the password.

Data in the application details section will be auto populated.
   (iv) Click the **Upgrade** button.

Features in 10.3 release

This section provides more information on 10.3 features.

Following are the features:

- Pages
- Configuring Node.js
- TreeView
- Auto arrangement of input fields in dynamic mode

Pages

The introduction of page designer in Axpert enriches the user experience in accessing the application. Axpert Pages is a collection of data that allows users to take informed decisions.

Whether it is placing widgets/iviews/forms or letting people quickly access key information - you can publish it as a landing page

Creating Pages

The user associated with the relevant access role (say admin) can create one or more pages for an application.

To create a page, follow the steps mentioned below:

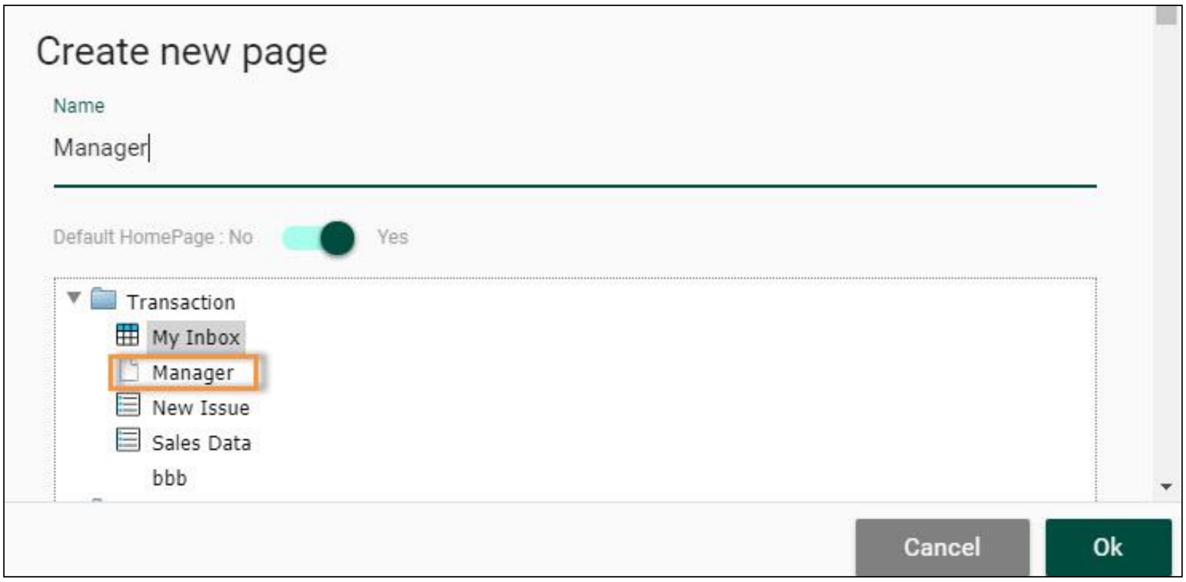
1. Login to an application.

2. Click the page designer  icon on the right corner of the landing page.

The page designer window appears.

3. Click the  icon on the right corner of the **Designer Canvas** section. The **Create new page** dialog appears.

4. In the **Name** box, enter a name for the new page.



5. Move the slider right if you wish to set the page as Default HomePage else move the slider left to set it as **No**.

6. Select the relevant menu or sub menu under which the new page has to appear.

7. Click the **Ok** button.

8. Select a responsive template and click the **Ok** button.

The new page appears as a tab in the Designer Canvas section.

Customizing Pages

Use the **property sheet** to modify the various properties of the page such as changing the template, authorization, modifying the page name and so on.

To access the property sheet, click on the relevant page name in the **Designer Canvas** section.

You can also place one or more widgets, reports and forms on the page by clicking and dragging the respective items from the object browser pane.

After making all the changes, save the page and click the  icon.

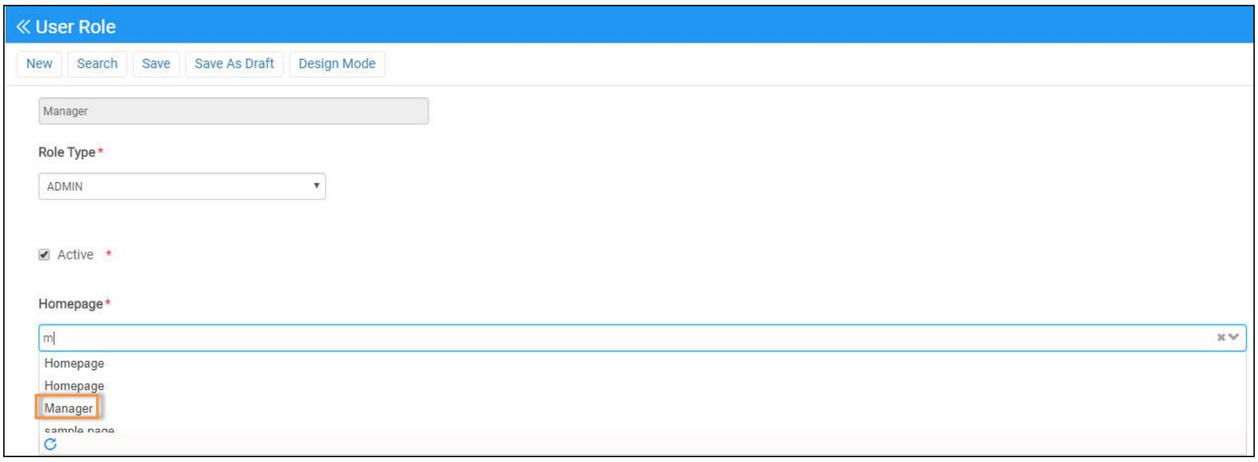
Assigning Pages to Roles

The user associated with the default role can assign a page to one or more roles.

You cannot assign multiple pages to a role/user.

To assign a page to a role, follow the steps mentioned below:

1. Navigate to the **User Role** form. The User Role page appears**.**



2. In the **Homepage** field, select the page that has to appear as a homepage.

3. Click the **Save** button.

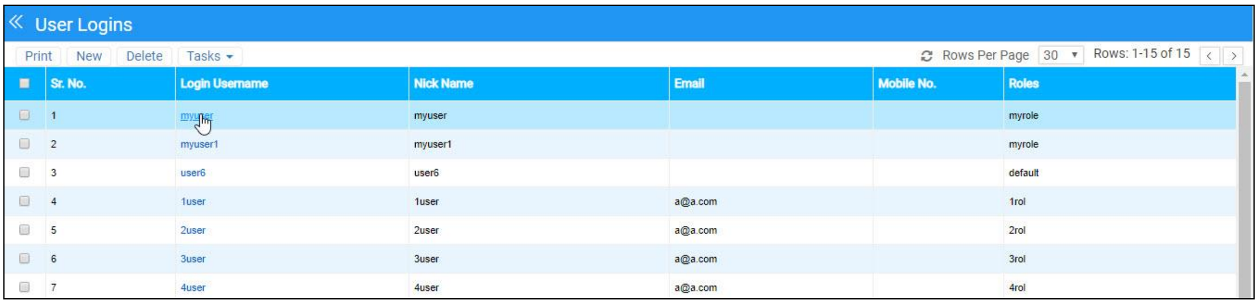
The selected page appears as a home page for that particular user role.

Assigning Pages to Users

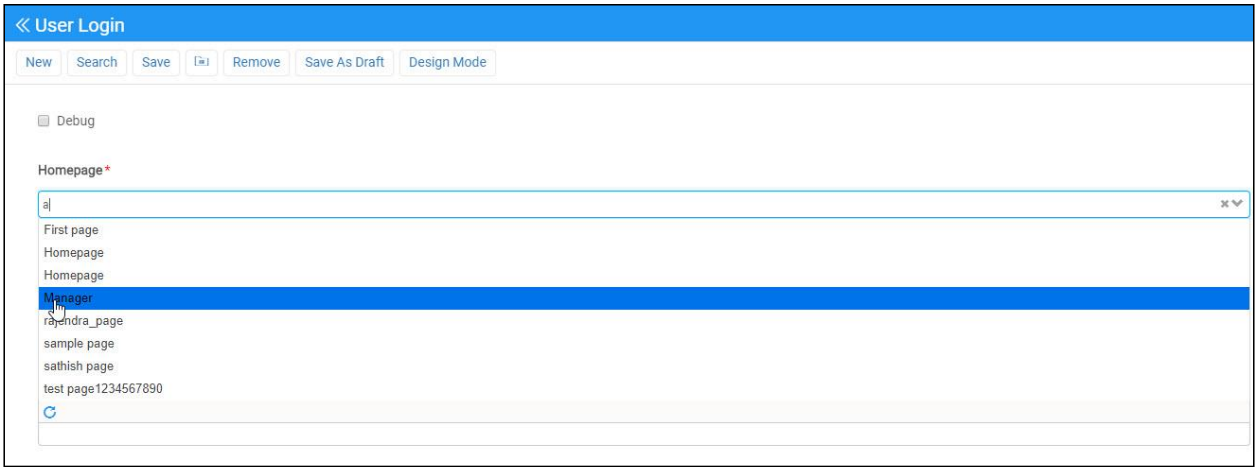
By default, users see their homepage upon login. You can specify a different login landing page for one or more users.

To assign pages to users, follow the steps mentioned below:

1. Navigate to the **User Logins** form.



2. Under the **Login Username** column, select a user for whom the page has to be assigned.



3. In the **Homepage** field, select a page that has to appear for the user.

4. Click the **Save** button.

Mapping Widgets

Mapping provides an easy way of linking widgets by passing the parameter value of one widget to another. You can map the following types of widgets with any combination:

• IView

• KPI

• SQL Query

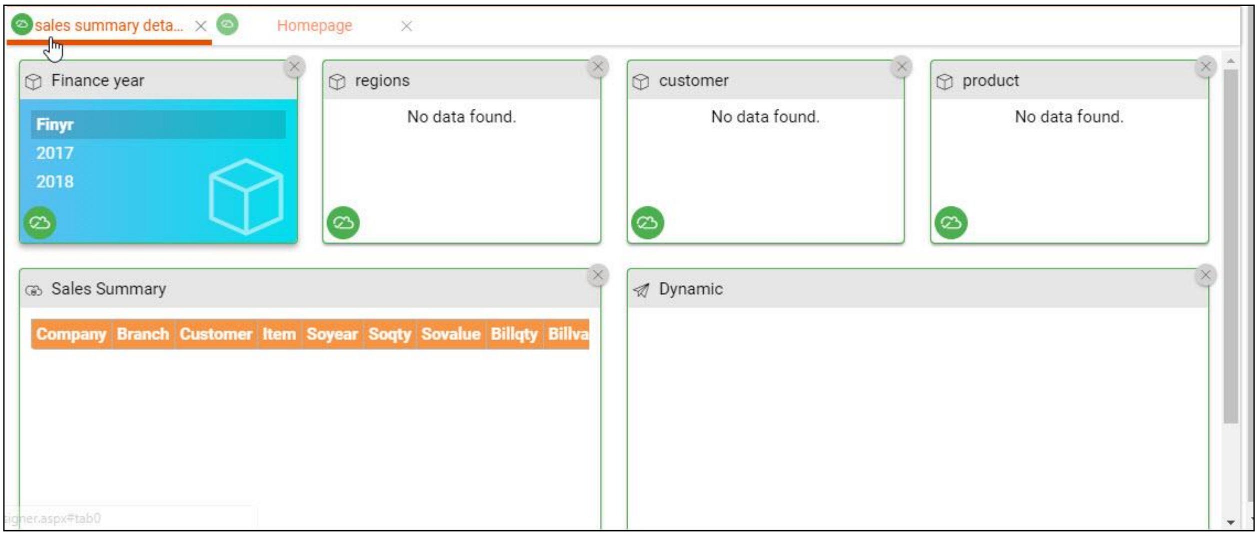
• Chart

For example, if you want to view the sales summary data of a company, based on certain conditions such as financial year, regions, product and so on, you can achieve that through pages.

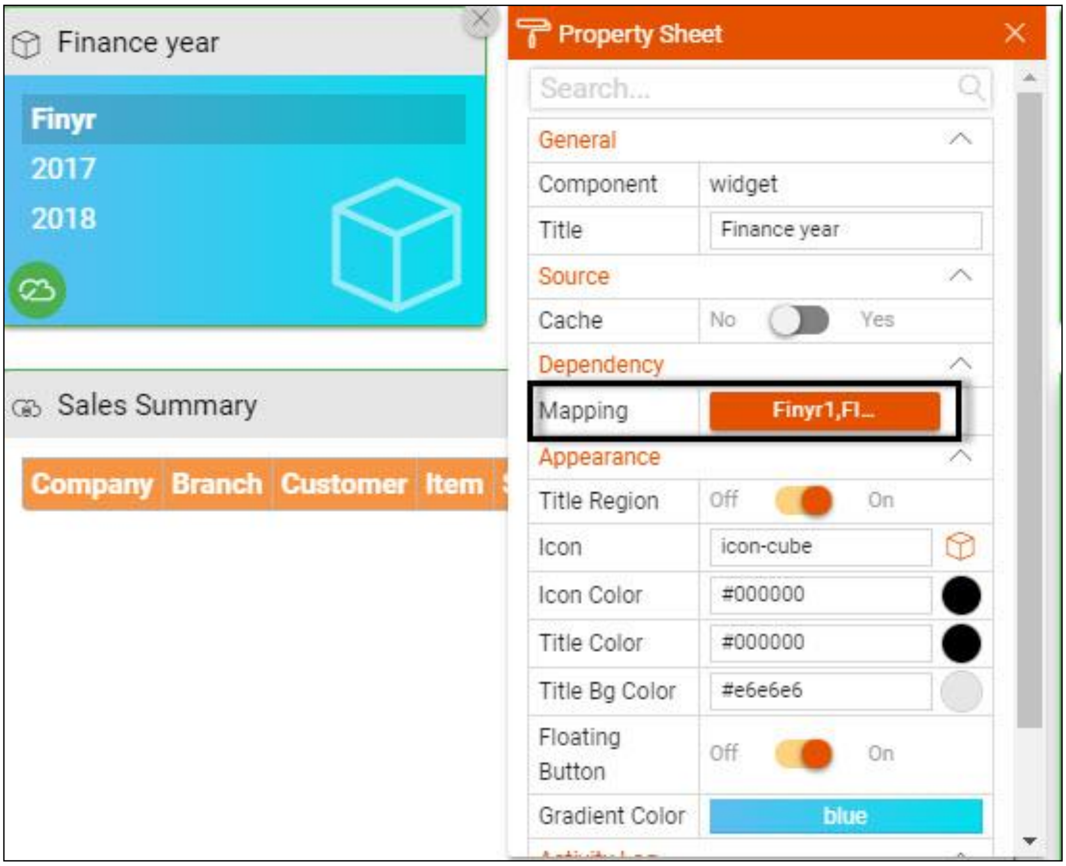
Procedure to achieve the above scenario:

1. Create a page.

2. Place widgets for the specified conditions such as Financial year, regions, customer, product and sales summary, on the created page.



3. Click on the widget to open the property sheet of that particular widget.



4. Click the **Mapping** field under the **Dependency** section to open **Parameter Mapping** window.

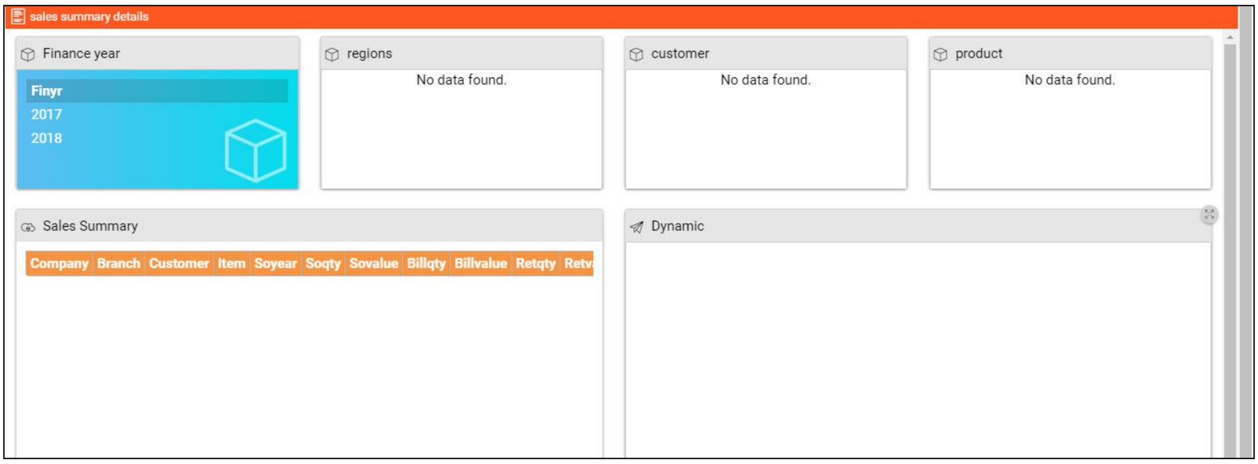
5. Select one or more parameters that has to be mapped with the corresponding widget and click the **Ok** button.

6. Similarly perform the mapping for other widgets, wherever necessary.

7. Click the **Save** icon and then click the **Publish** icon.

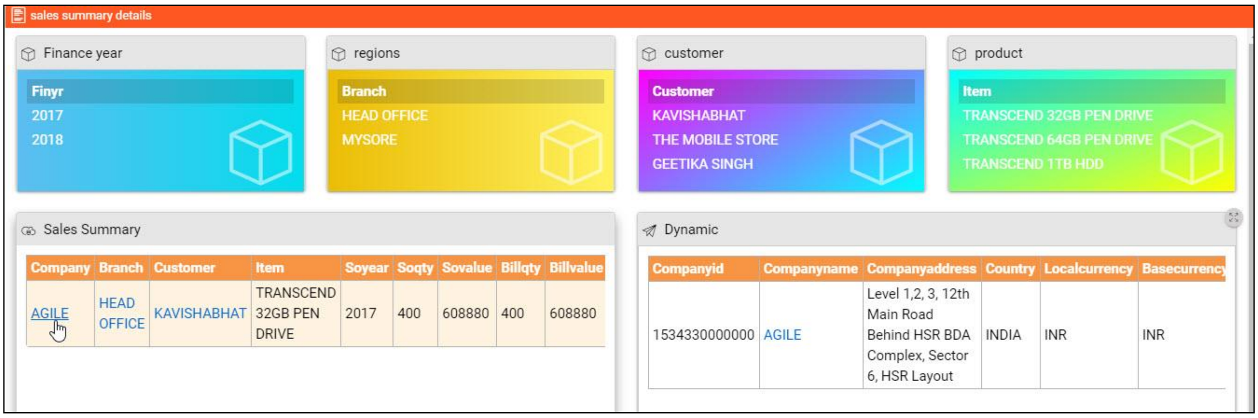
8. Navigate to the home page.

You can see the created page appearing as a landing page.



9. Click the **Finance Year** widget. You can see the data mapped for finance year widget appears in regions widget.

Similarly, when clicked on the other widgets, data appears in the respective mapped widget.

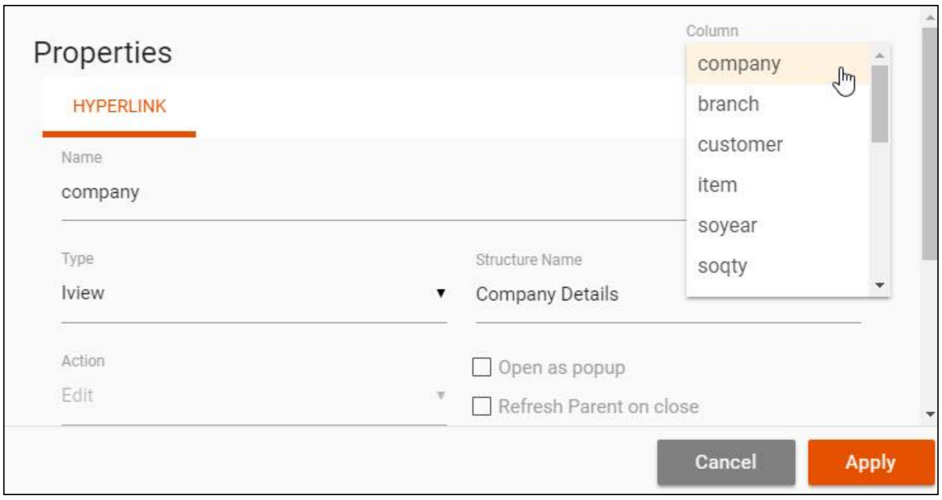


Dynamic Widgets

IViews with hyperlinks can now be opened in one of the most powerful widgets called “Dynamic Widget” instead of displaying it in a new pop-up window.

You can pass data to Dynamic widgets in the following ways:

- Place a Dynamic Widget in the Page Designer.
- For IView widgets, define hyperlinks for columns.
- For SQL widgets, define hyperlinks using the property sheet of a widget



- For widgets created using widget builder, add $target=inline syntax in hyperlink statements. For example, 'h1=icars(make='|| manufacturer ||')$target=inline' as link

Opening Pages from Reports

You can open a page from a particular report and can also pass the required parameters to that page. To achieve this, you must have a column with an anchor tag as follows:

<a href=’page.aspx?axpage_id={id}&param1=value1&param2=value2’>

where, {id} is the id of the page you wish to open. You can view the id of the published page from AX_PAGES table.

Additionally, you can also pass the page title as a parameter instead of id.

<a href=’page.aspx?axpage_title={title}&param1=value1’>

where, {title} is the title of the page. Inside href, link must be URL encoded

Configuring Node.js

Whenever you update an application using Installer, existing data in dbconfig.js file was getting overridden. In order to retain the existing data in dbconfig.js file, XML configuration was introduced.

Going forward, all changes are to be done in **dbconfig.xml** instead of **dbconfig.js**.

For **new** applications, navigate to

AXPERT_HOME/AxpertWeb/node/config/dbconfig.xmlfile and edit the XML content.

In the above syntax,

AXPERT_HOME is the location where your Axpert files are installed in your local drive.

For example, you can represent application's port number in XML file as follows:

<applicationport>3015</application port>

For **existing** applications, follow the steps mentioned below:

1. Navigate to **dbconfig.xml** file under ***AXPERT_HOME/AxpertWeb/node/config***

folder and update the necessary values in .XML file.

2. Take a backup of **dbconfig.js** file before updating.

For example, if you have changed the values of the host keys in your **dbconfig.js** file, copy the same and place it in **dbconfig.xml** file as per the below format:

<host>127.0.0.1</host>

Another example in **dbconfig.js** file might be as follows:

axpMobileSPath (for mobile notifications):'C:\\inetpub\\wwwroot\\TAxpertScripts\\',

Now, copy **C:\inetpub\wwwroot\TAxpertScripts** into **<axpMobileSPath>** element.

In XML file, It should look like

<axpMobileSPath>C:\inetpub\wwwroot\TAxpertScripts\</axpMobileSPath>

Example 1:

<activeMobileApp>

<element h="1"></element>

</activeMobileApp>

Element values can be empty in dbconfig.xml, but if your dbconfig.js consists of some values, then you must add those values inside the element tag as per the above syntax.

Example 2:

In dbconfig.js file, values are represented as follows:

activeMobileApp : ['bizops', 'hms']

You must represent the .js values in dbconfig.xml as shown below.

<activeMobileApp>

<element h="1">bizops</element>

<element h="2">hms</element>

</activeMobileApp>

3. Change the tnsnamenode according to the system/server host string.

If the default host string is **orcl**, then the tnsnode will be represented as <tnsnamenode>orcl</tnsnamenode>

Do not use single quotes (‘) or double quotes (“) inside the XML file while copying from dbconfig.js

The following table provides more examples on converting JSON parameters to XML format.

JSON	XML
activeMobileApp : [“”]	<activeMobileApp> <element h="1"></element> </activeMobileApp>
"activeMobileApp":["hr",”axpert”]	<activeMobileApp> <element h="1">hr</element> <element h="1">Axpert</element> </activeMobileApp>
applicationport: 3015	<applicationport>3015</applicationport>
env : "production"	<env>production</env>
maria_mysql_dbport: 3306	<maria_mysql_dbport>3306</maria_mysql_dbport>
"axpMobileSPath":"C:\\inetpub\\wwwroot\\TAxpertScripts\\"	<axpMobileSPath> C:\inetpub\wwwroot\TAxpertScripts\</axpMobileSPath>
"worker_auto":true	<worker_auto>true</worker_auto>

TreeView

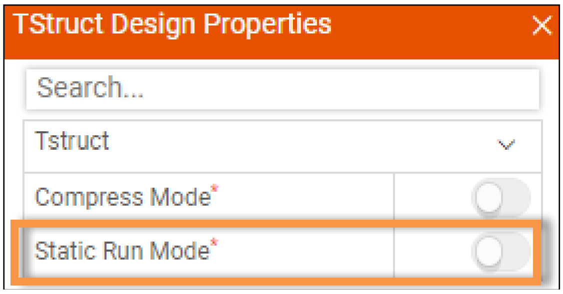
Using this feature, you can display a hierarchical data as a tree in reports. By using the treeview, you can drill down into the children of a tree item. To facilitate this, it is mandatory to have columns such as particulars, root_type and root_class.

Tree nodes can be expanded to display the next level of child tree nodes. The user can expand the tree node by clicking the (+) button displayed next to the tree node.

Additionally, Nodes can be expanded/collapsed via the user interface (using Expand All and Collapse All buttons).

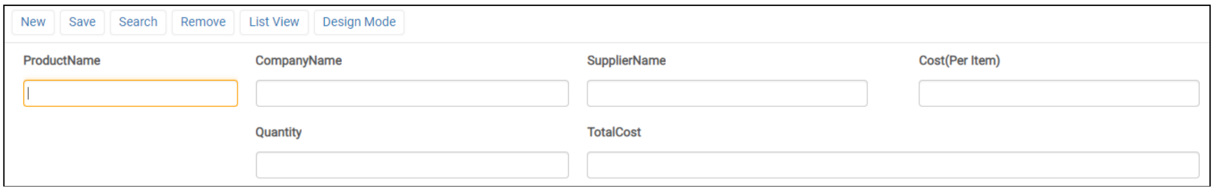
Auto arrangement of input fields in dynamic mode

You can now view the input fields in the form getting auto arranged in the run mode. To use this feature, navigate to the design mode of a form and disable 'Static Run Mode" option in the {TStruct Design Properties} sheet.



How this feature works?

If you enable static run mode, fields placed in the design mode of a form will appear static in the run mode. The screenshot below illustrates the static placement of fields if you enable **Static Run Mode** option.



If you disable static run mode option, fields placed in the design mode of a form will auto arrange in the run mode. The screenshot below illustrates the auto arrangement of fields if you disable **Static Run Mode** option.

Enhancements in 10.3 release

This section provides more information on enhancements done in Axpert Web 10.3.

Sections of this chapter:

- Performance Improvement
- Enhancing Website Security

Performance Improvement

In this release, overall performance of the Axpert web applications has been drastically improved by reducing the time taken during form load, data load and data entry. To view the performance improvement in backward compatibility versions as well, you must create a record in {AXPWS_CONFIG} table with form name and version no.

{For example, if an Axpert App "BizERP" is created in Axpert version 10.3 or upgraded to 10.3, all form load, data load and data entry would be rooted through new performance change features. In this case, if a Solution Developer wants to load a particular form and it's data entry (say FormA, FormB etc.) are in older versions (10.2, 10.1 etc) and due to some reason if he undergoes any definition issue or an error due to some new performance logic, he needs to insert a record in "**AXPWS_CONFIG**" table as given below.

1. insert into AXPWS_CONFIG(transid,versionno) values ("FormA","10.2").

2. insert into AXPWS_CONFIG(transid,versionno) values ("FormB","10.1").

Enhancing Website Security

This topic provides more information on how to protect your website/server.

(i) **X-Frame-Options**: It is a web header used to protect a website against clickjacking attacks. In these attacks, the vulnerable site is loaded in a frame on an attacker-controlled site which uses opaque or transparent layers to trick the user into unintentionally clicking a button or link on the vulnerable site.

Settings:

Set the X-Frame-Options to "SAMEORIGIN" if you feel the framing is needed in certain circumstances. By using this, you can limit the ability to frame the site to pages from the same origin. If Axpert Web and AxpertWeb Scripts are hosted in different server, then use ALLOW-FROM http://www.example.com instead of SAMEORIGIN.

You can now specify the header in the Web.config file, using the <customHeaders> tag.

Example

Add the following syntax into the Web.config file in the path

/configuration/system.web/system.web.extensions/security/httpProtocol/customHeaders/

Syntax:

<add name="X-Frame-Options" value="SAMEORIGIN"/>

(ii) **Remote Server Header**: This attribute is added in IIS 10 to suppress sending the HTTP server header to remote clients.

Note: If your IIS version is less than 10.0, delete removeServerHeader="true"attribute from request filtering. Otherwise, IIS will not work.

Example

Add the following syntax into the Web.config file in the path

/configuration/system.web/system.web.extensions/security/

Syntax:

<requestFilteringremoveServerHeader="true">

(iii) **X-Powered-By**: This is a custom header in IIS. It indicates the framework in which the website is running. Hence, it is advisable to remove this header from the response. By removing this, automatic vulnerability scanners will not immediately know which version of software they are dealing with and due to which the automatic vulnerability discovery gets harder.

Example

Add the following syntax into the Web.config file in the path **/Configuration/system.web/system.web.extensions/security/httpProtocol/customHeaders**.

Syntax:

<remove name="X-Powered-By" />

(iv) **enableVersionHeader**: In order to apply security in layers, excessive header information is removed. On the surface, this data is of no use, but when dug little deeply, it becomes useful for evildoers.

Example

Add the following syntax into the Web.config file in the path /Configuration/system.web/

Syntax:

<httpRuntimeenableVersionHeader="false" />