

TeQRDP Manual

24.REF1-TEQRDP-MANUAL

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Document Control

This section controls the document summary, including version history of the document, a document distribution list and document references used for this manual.

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Goal of Procedure

This document describes the step by step procedure for importing and using TeQRDP.DLL in Wonderware System Platform IDE.

TeQRDP is a solution that uses a plugin to connect to Remote Desktop via a .Net control application in ArchestrA IDE version 2017 Update 3 SP1 and you can use it in ArchestrA version 2014 R2 based on the current code base.

TeQRDP is now configurable to link it up to the Wonderware Security Framework and the procedure is included in this document.

TeQRDP Compatibility Matrix

TeQRDP is tested on the following software versions:

	Wonderware System Platform	Operating System	Minimum Requirement
	Wonderware Application Server 2014 R2 SP1 4.1	Windows Server 2012 R2	Microsoft .NET Framework 3.5
	Wonderware Application Server 2017 Update 3 SP1 17.3.100	Windows Server 2012 R2	Microsoft .NET Framework 3.5

Table 1-Compatibility Matrix for Wonderware version and OS

Import TeQRDP in ArchestrA IDE

Step 1

Connect to the galaxy repository to open the Integrated Development Environment (IDE). Import the client controls from the TeQRDP.dll file. Click Galaxy – Import – Client Control from IDE as shown below.

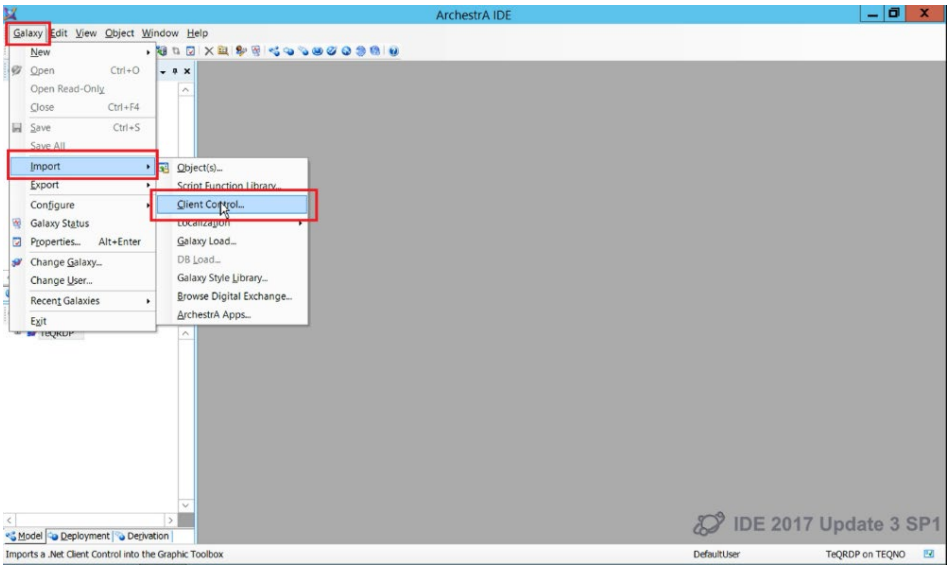


Figure 1-Import TeQRDP.DLL

Step 2

Browse the folder which contains TeQRDP.DLL and select TeQRDP.dll.

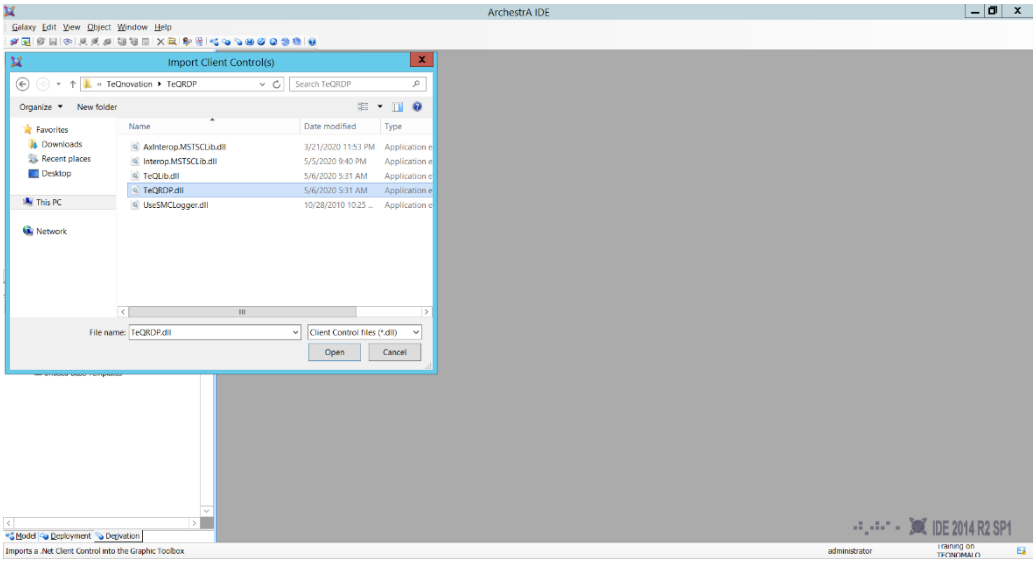


Figure 2-Import a TeQRDP Client Control into the Graphic Toolbox

Step 3

Click “OK” to accept the default “Skip: Do not import” to avoid the import of controls with the same tag name as an existing object.

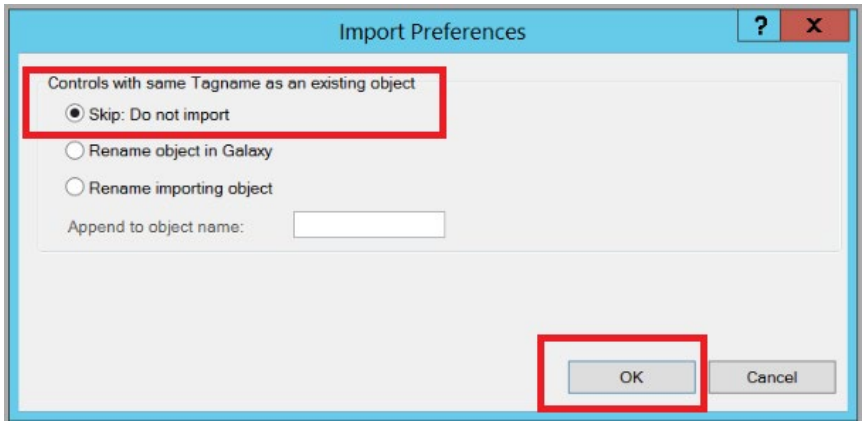


Figure 3-Import Preference

Step 4

The import of the client controls will proceed. Wait for the Import completed notification before clicking the “Close” button.

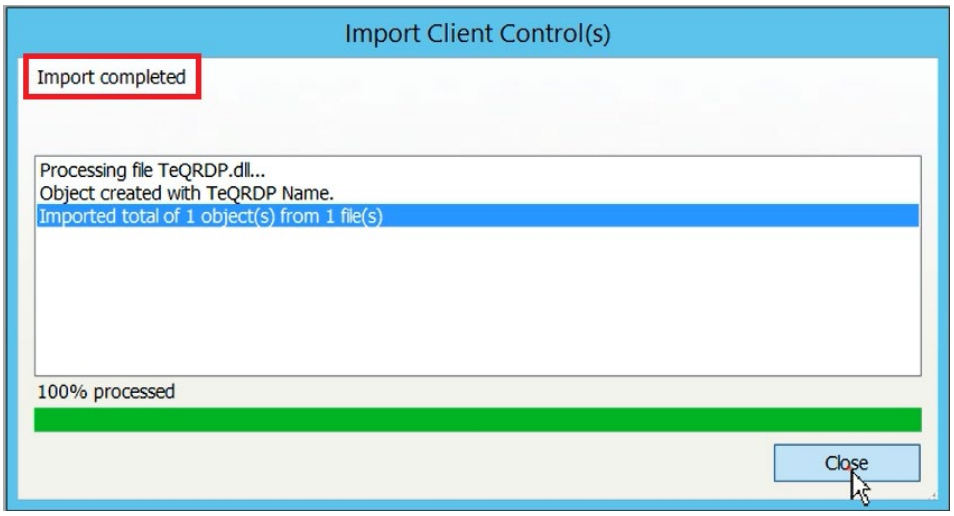


Figure 4-Import Completed

The TeQRDP is now installed and ready for use. View the IDE Graphic Toolbox to see TeQRDP.

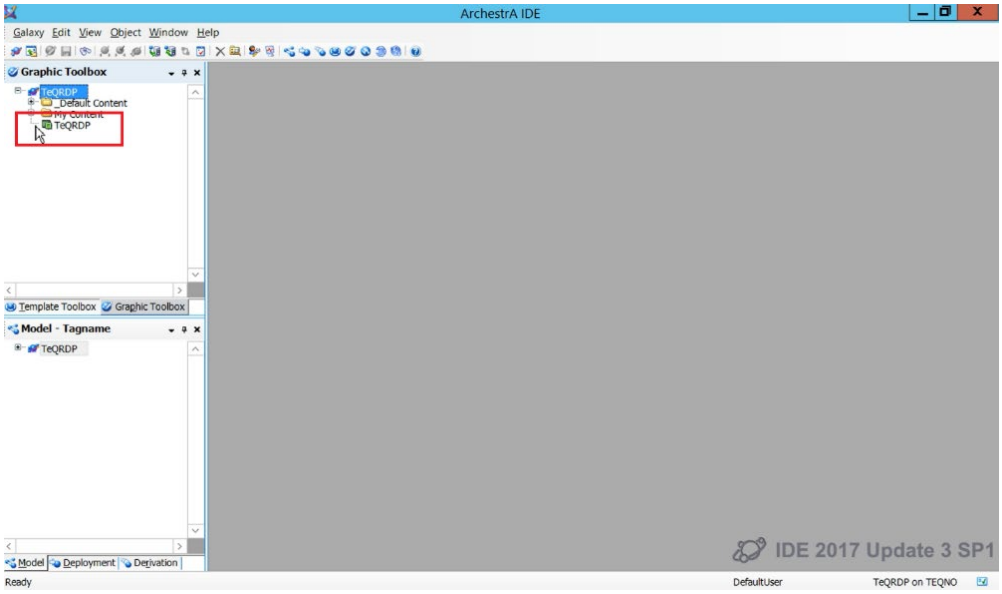


Figure 5-Graphic Toolbox with TeQRDP

Using TeQRDP

The following step by step procedure will show how to embed the TeQRDP in a symbol and use it in Runtime.

Step 1

Create a new symbol or open an existing symbol to add one or more of the client controls. Right-click on the Graphic Toolbox – Galaxy to select New – Symbol.

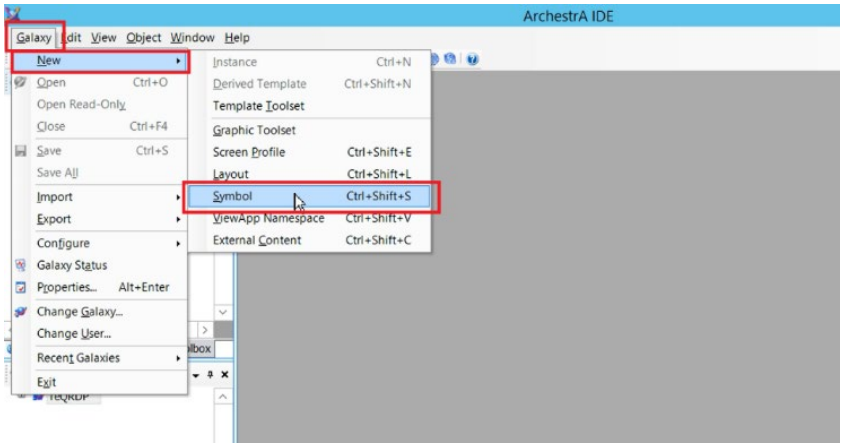


Figure 6-Create a New Symbol

Step 2

Right-click on the new symbol or double click to open the new symbol for editing. The Symbol Editor will be launched.

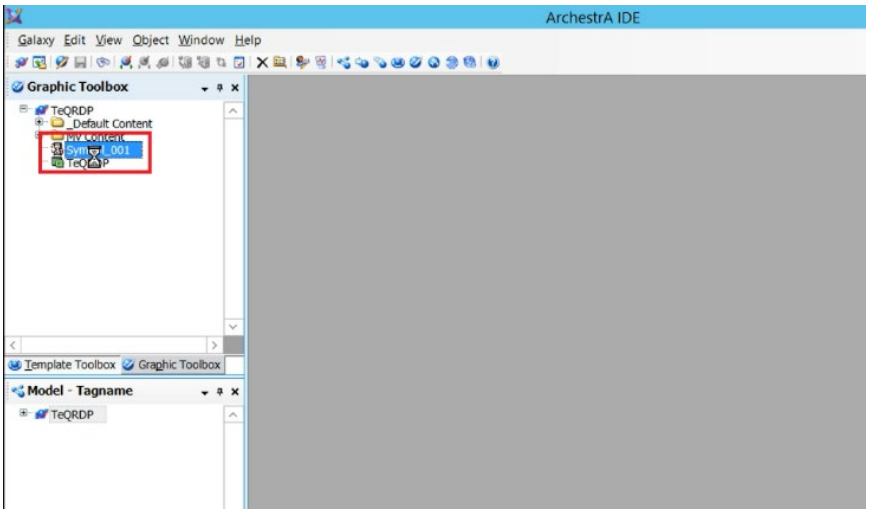


Figure 7-Open Symbol

Step 3

Click embed graphic to open the galaxy browser.

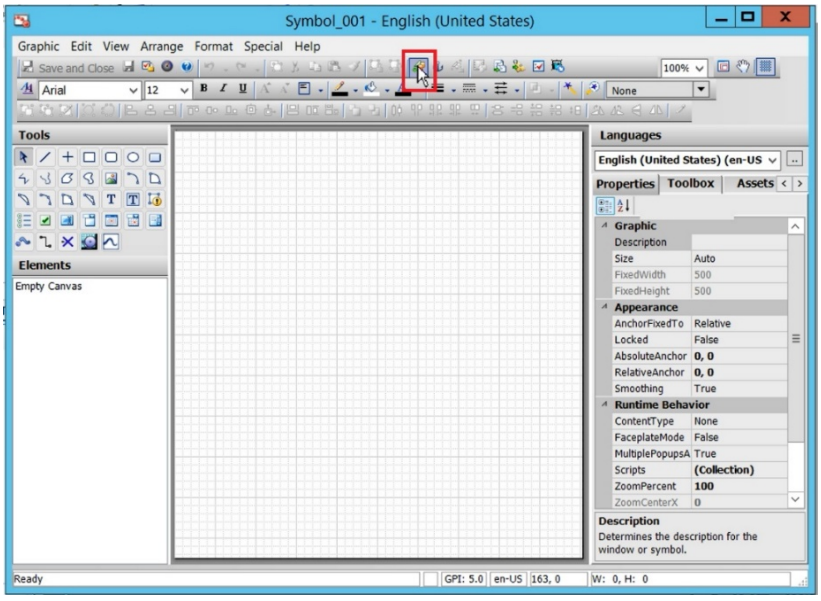


Figure 8-Click Embed Graphic Button.

Step 4

Click the graphic toolbox symbol then select galaxy to be able to browse the imported TeQRDP Then select the “TeQRDP” object then click the “OK” button.

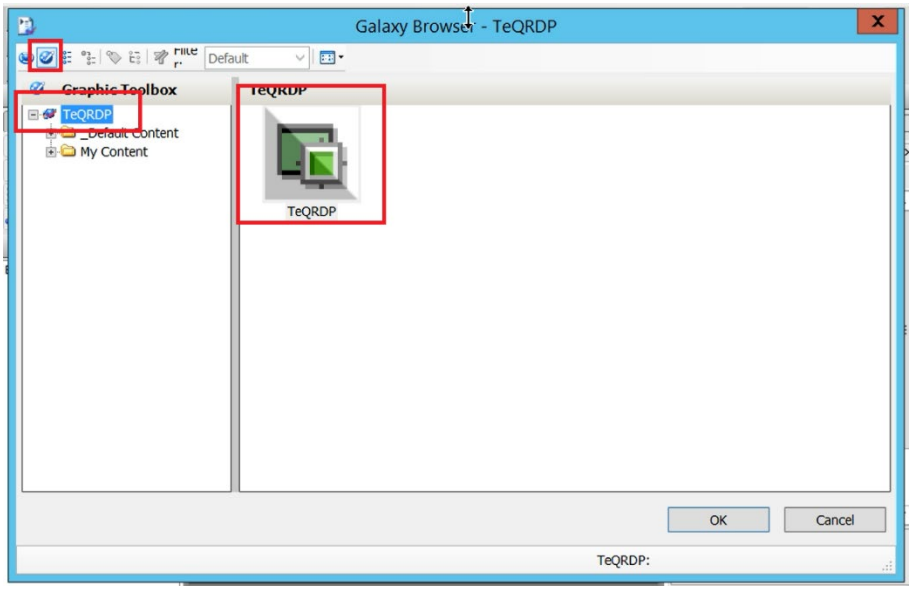


Figure 9-Embed TeQRDP in Symbol Editor

Step 5

Left-Click in the graphic area to embed TeQRDP. Set the properties of TeQRDP based on the following setting available as shown below:

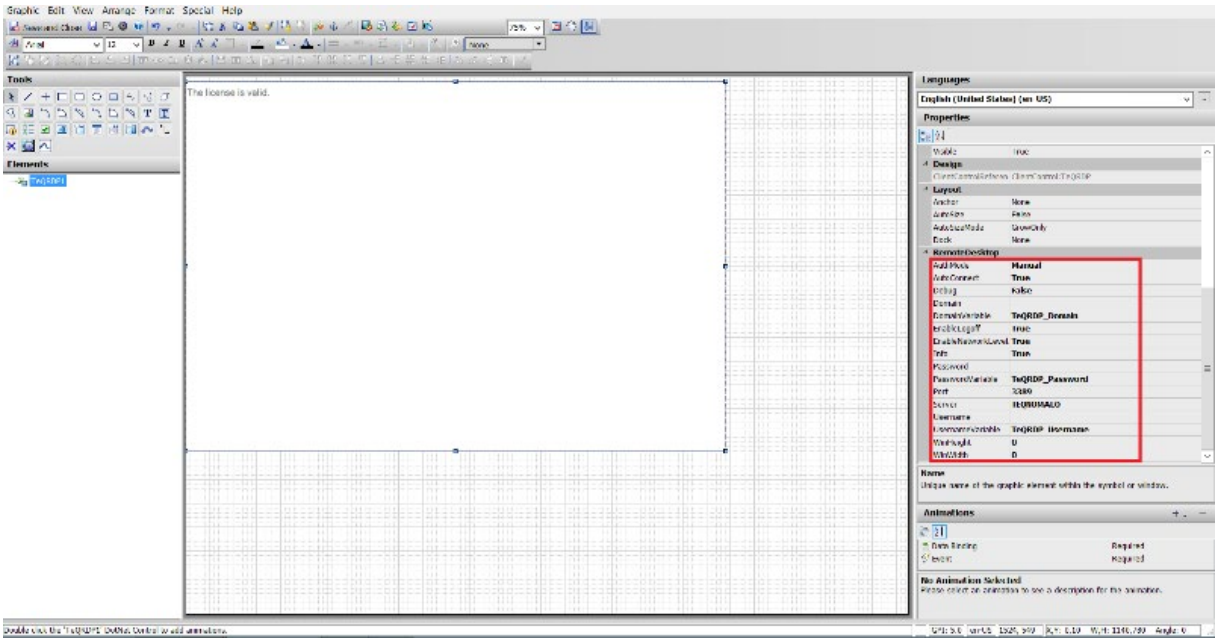


Figure 10-TeQRDP is embedded in Symbol Editor

- **AuthMode**: This property specifies how to connect to the destination machine; it can have three values:

  1- *Manual*: The value of the username and password must be entered here.

  2- *Galaxy*: If you want to use the username and password of the Galaxy security system, you must put the status in this mode. Check the security section, for more information on how to use this method.

  3- *Destination*: In this case, it is connected to the destination machine without a username and password, and the user must enter the username and password after connecting.

  Default value of this property is **Manual**.

- **AutoConnect**: This property used for connecting automatically to the remote machine, if it is set as true then it will be connected automatically
- **Debug**: If there is a problem with TeQRDP and you want to see the error in a dialog box you should set it as true, default value is false.
- **Domain**: If the **AuthMode** set as manual and the remote computer is using an active directory you should set the domain name here.
- **EnableNetworkLevelAuthenticationSupport**: If the remote machine's security has checked this option "Allow connections only from computers running Remote Desktop with

Network Level Authentication" then you must set this property as true, the default value is true.

- **EnableLogoff:** RDP provide two options when closing a client session: you can either "Log Off" or "Disconnect".

    - ***Log Off***: Ends the session running on the remote computer or server. Any applications running within the session will be closed and unsaved changes made to open files will be lost. The next time you log onto the remote computer or server, a new session will be created.

    - ***Disconnect***: Leaves the session running on the remote computer or server. You can reconnect to the remote computer or server and resume the session. If you are running a task on the remote computer or server, such as a time-consuming query on a database, downloading a file, etc., you can start the task and disconnect from the session. Later, you can log back onto the remote computer or server, re-enter the session, and check the results. This is especially helpful when operating over a remote access connection on a mobile network.
    - If you set this property as true, then on disconnect you will be logoff from the remote machine.

- **Info**: This property enables/disables the status bar, if it is set as true, the status bar will be enabled, and you can see connecting status on it. Default value of it is false.
- **Server**: Ip or name of the remote machine should be entered here if you leave it blank and *AutoConnect* status is true then you will get an error.
- **Port**: The RDP connection using the port 3389 as default, in case it is changed by the network administrator, it should set back to the correct port.
    - ***Note:*** *this port should be open on the firewall.*
- **Username**: if the AuthMode set as manual you must insert the username of the remote machine, otherwise leave it blank.
- **Password**: if the AuthMode set as manual you must insert the password of the remote machine, otherwise leave it blank.
- **DomainVariable**: This is explained in Using Wonderware Security.
- **UsernameVariable:** This is explained in Using Wonderware Security.
- **PasswordVariable:** This is explained in Using Wonderware Security.
  The resolution of the remote machine cannot be changed, but you can set the resolution that you want the windows open with it. The width and height can be set if you put as default 0 then resolution will be the size of TeQRDP symbol:
    - **WinWidth**: Screen width of the remote computer.
    - **WinHeight**: Screen height of the remote computer.

Step 6

Click “Save and Close” the symbol and wait until is it checked in.

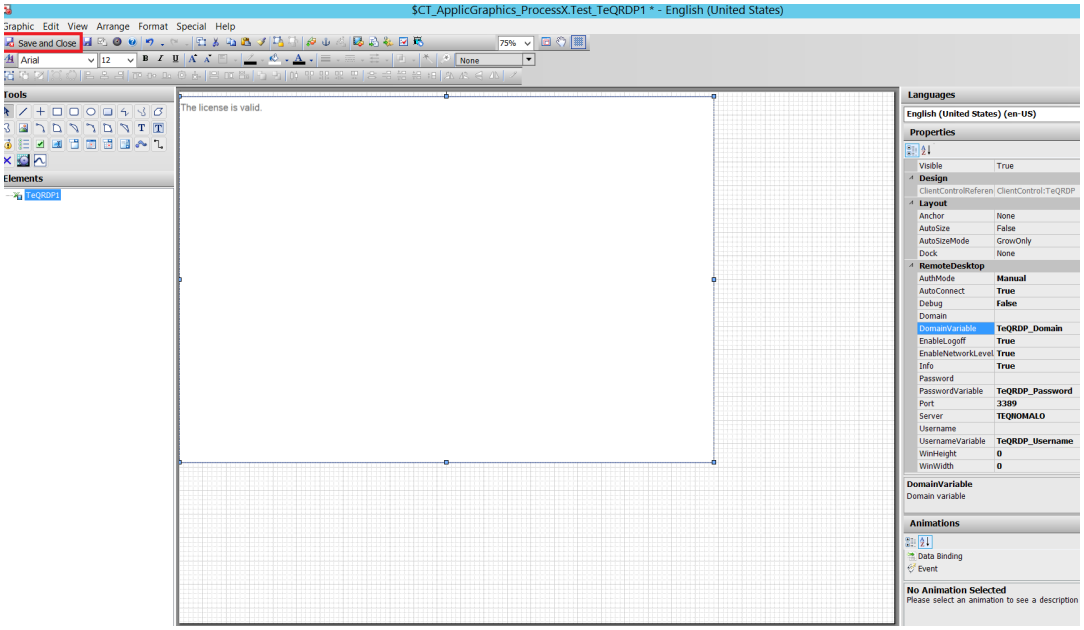


Figure 11-Save and close Symbol

Step 7

Import the symbol with TeQRDP in a window in the InTouchViewApp, then click Runtime.

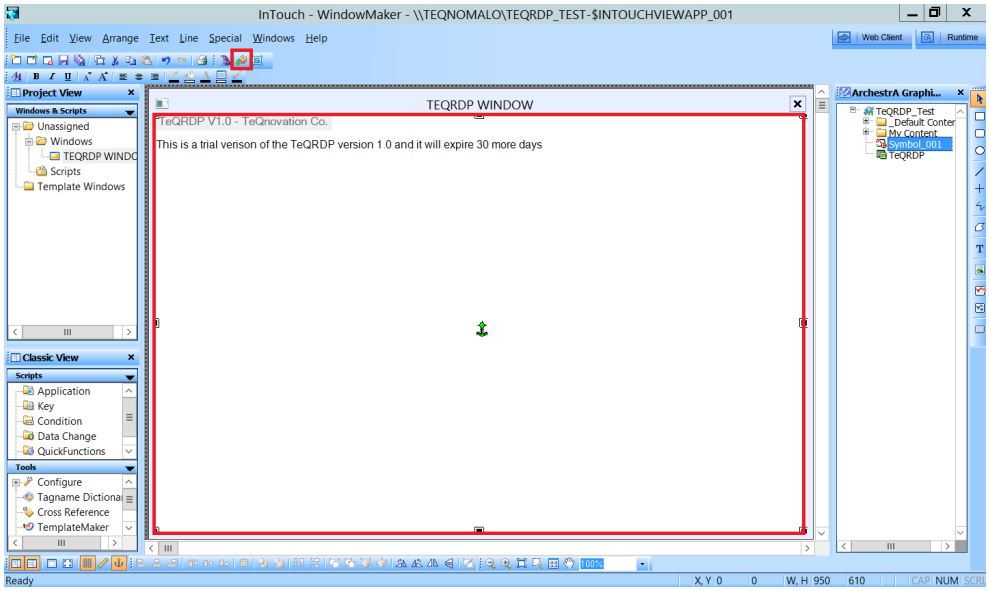


Figure 12-InTouch WindowMaker

After clicking runtime, the remote desktop will connect.

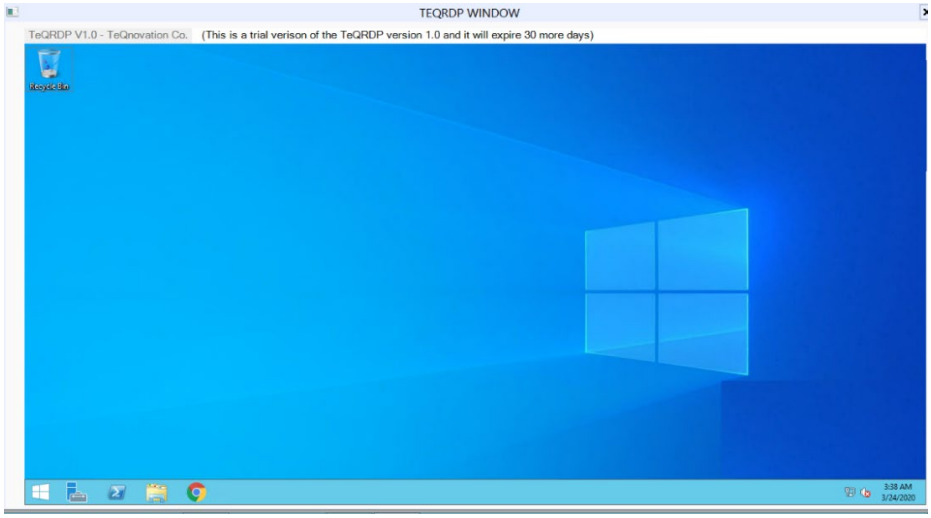


Figure 13-Runtime

If you do not set “Connect” property to “True” or you log-off/disconnect from the remote desktop then you can connect manually by click on "Connect".

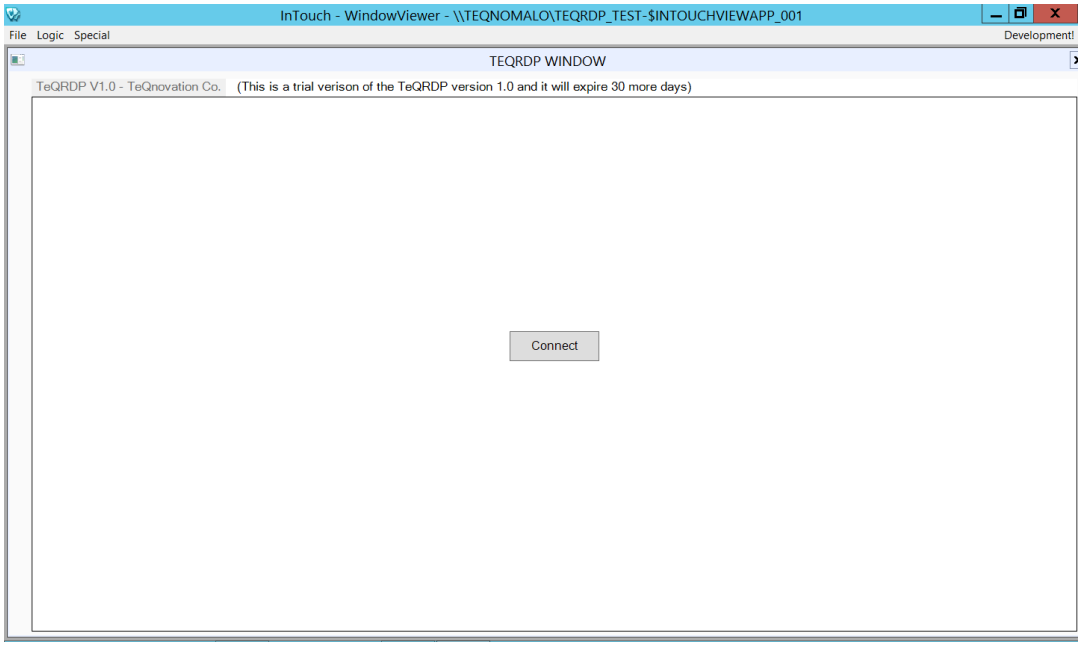


Figure 14-Manual Connect

TeQRDP License Activation (InTouch Runtime)

The following section will discuss the steps to activate the license. Once the trial period expires you can purchase the license by clicking the “Buy a license” link in as shown below:

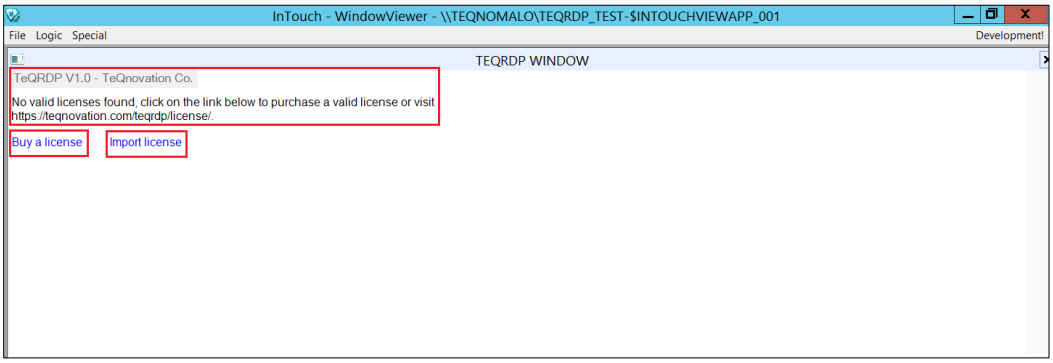


Figure 15-No Valid License Found

Step 1

Once you have purchased a TeQRDP license from TeQnovation, you will receive a license file that you need to open in notepad and copy all the content by pressing CTRL-A (Highlight all) and CTRL-C (Copy).

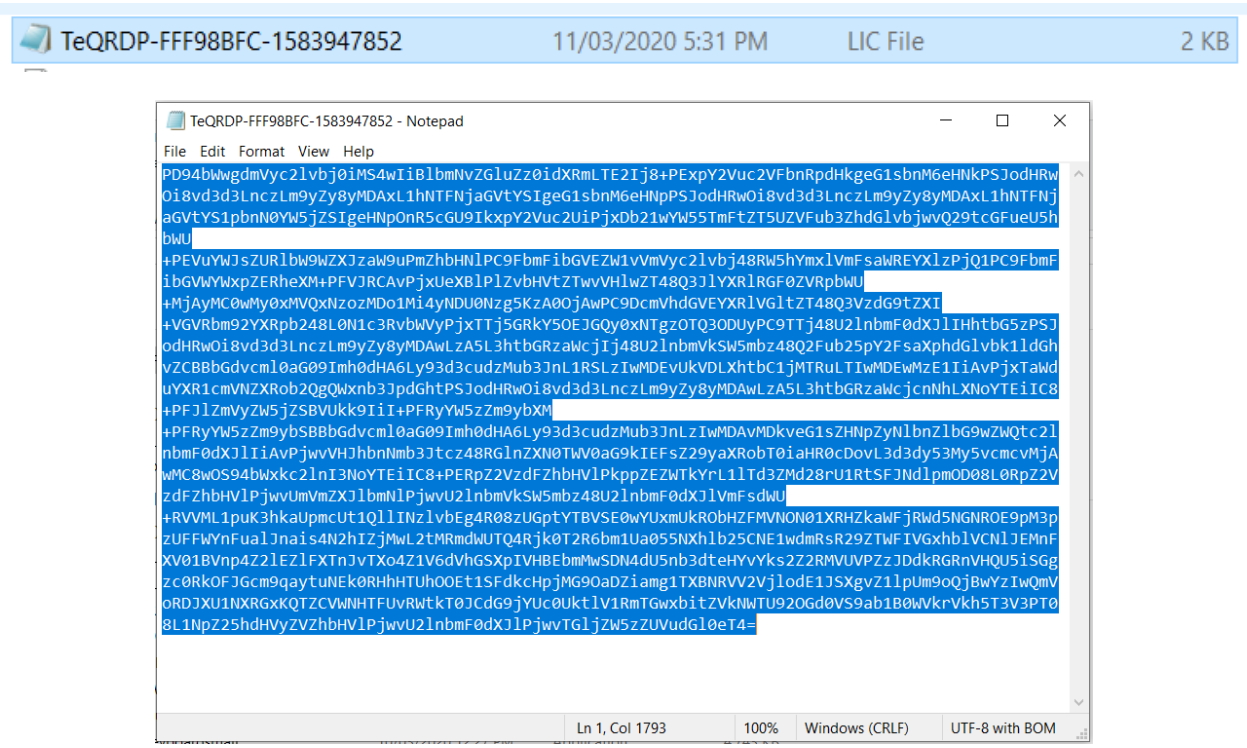


Figure 16-TeQRDP License File

Step 2

Left-Click on the license area then press CTRL-V (Paste) to input the license. Press “Ok” to install the license.

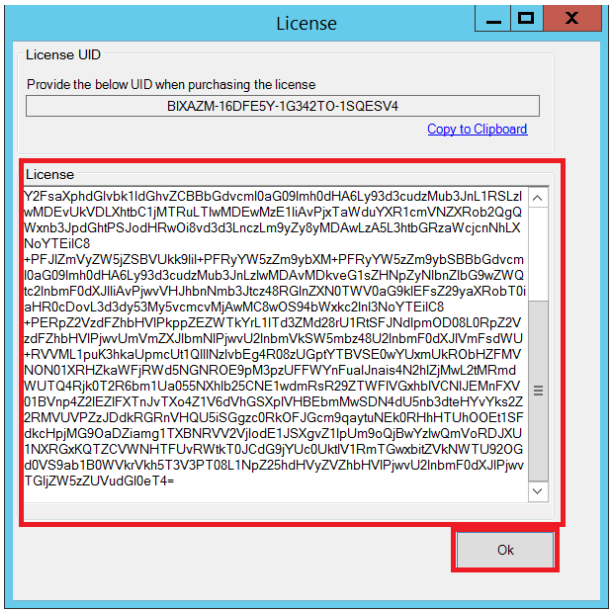


Figure 17-TeQRDP License Window

- **Note**: If you need a single license type, you need to provide the UID to TeQnovation when purchasing the license.

Step 3

A pop-up with a message “license is valid” will appear after the successful installation of the TeQRDP license. Click on “OK”

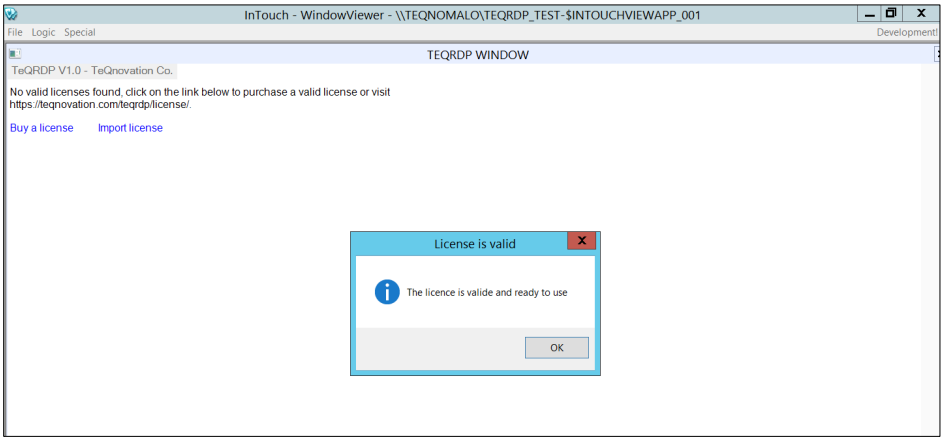


Figure 18-License Installation Successful

it connects automatically after license installation and the demo version message disappears.

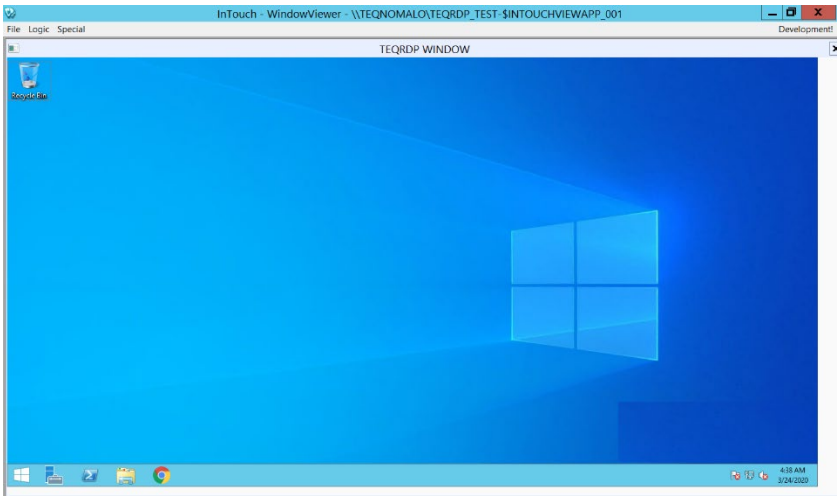


Figure 19-TeQRDP Licensed

TeQRDP License Activation (Manual)

To activate the license manually, copy the purchased license file to TeQRDP folder as shown below:

C:\ProgramData\TeQnovation\TeQRDP

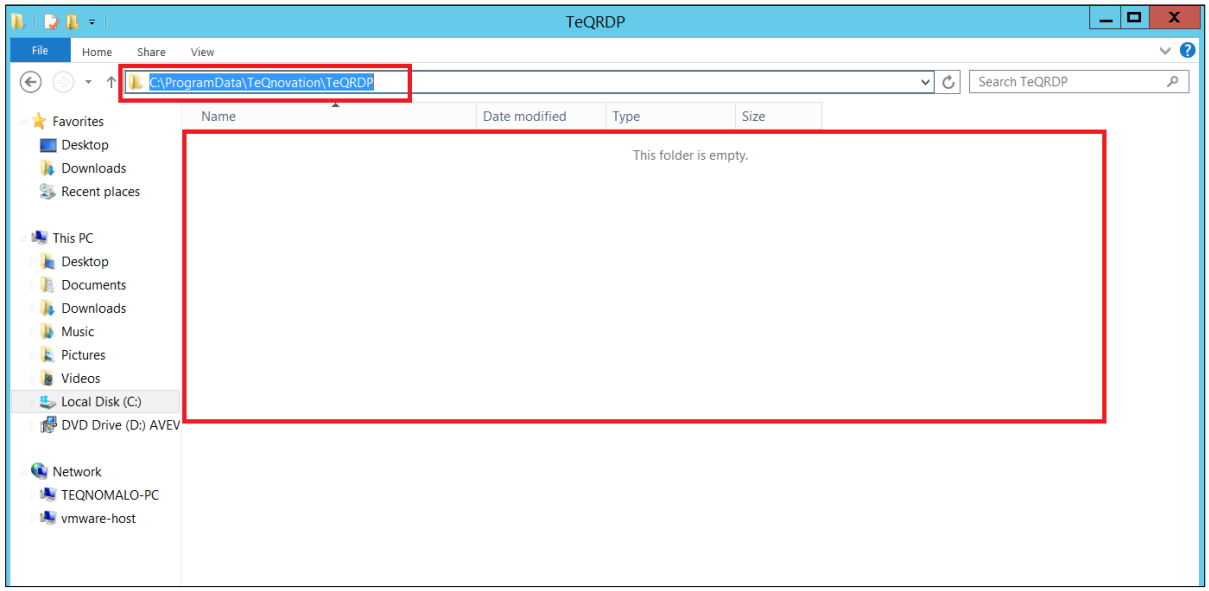


Figure 20-TeQRDP License folder

- **Note:** The TeQRDP folder is automatically created once TeQRDP is embedded in the ArchestrA IDE symbol.

Log viewer

In the Log viewer see some information like connection, disconnection and errors that occurred in the SMC Log viewer under UseSMCLogger can be checked.

Using Wonderware Security

To connect to remote desktop with Active Domain Security or Wonderware security, please follow below steps:

Step 1

First set the Authentication Mode for the Galaxy by choosing “Security” as shown below.

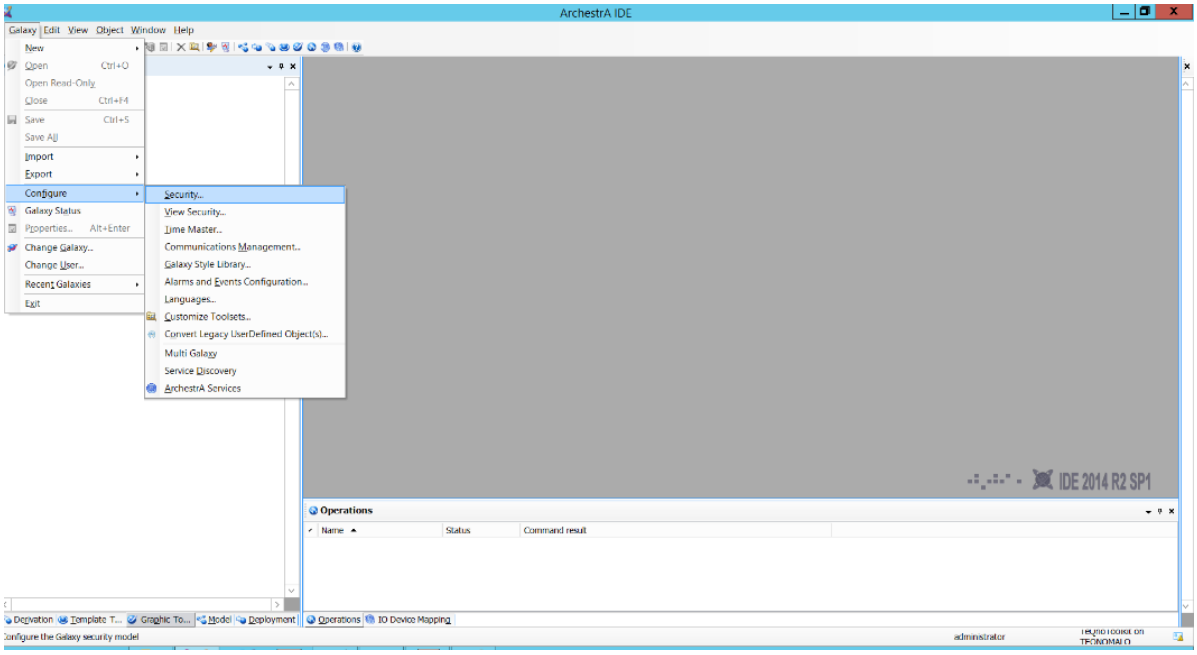


Figure 21-Open Authentication Setting

Step 2

Here you can set the mode of Authentication you need, if you are on an Active Domain Security controller you should choose OS User based or OS Group base.

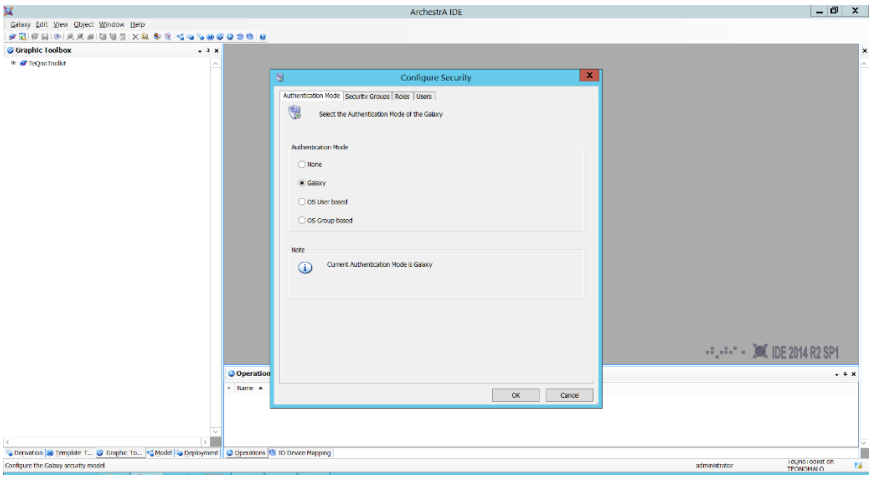


Figure 22-Set Authentication Mode

Step 3

If you chose “Galaxy” in the previous step, you should define user and password here.

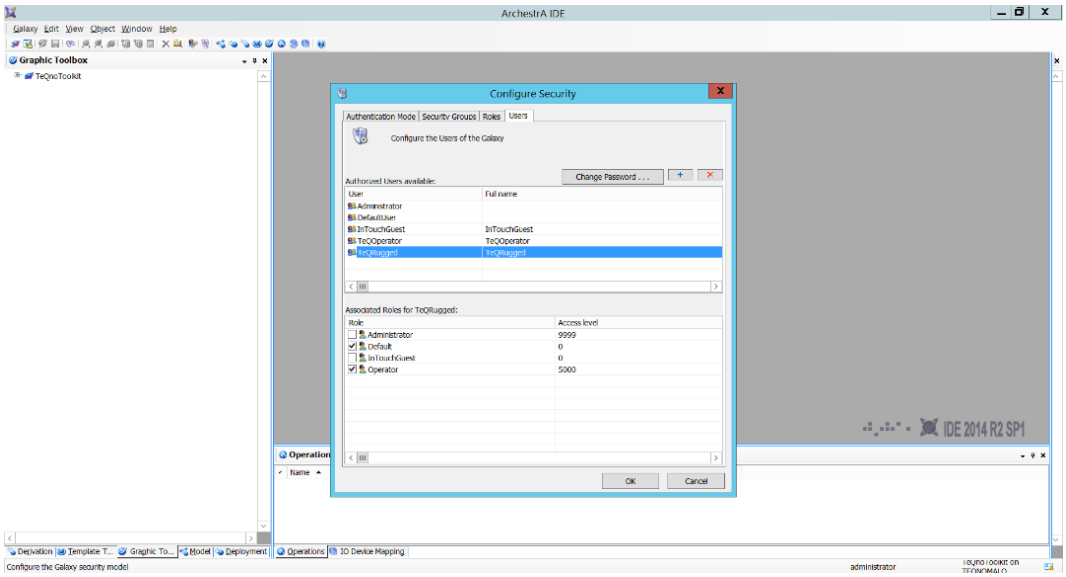


Figure 23-Add user

Step 4

Set AuthMode as Galaxy, remove the Domain, Username and Password properties values.

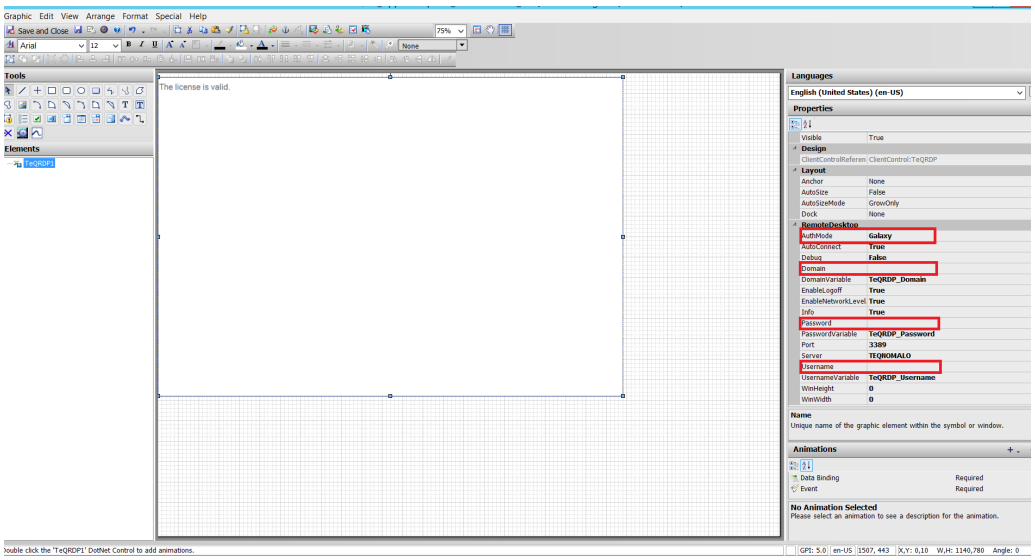


Figure 24-TeQRDP Properties

Step 5

TeQRDP can read domain, username, and password from a shared area with other parts by calling the System.AppDomain.CurrentDomain.GetData, this method gets a variable name and returns value, name of the variable for the domain, username and password should be set in TeQRDP symbol properties in DomainVariable, UsernameVariable and PasswordVariable, you can leave the default value.

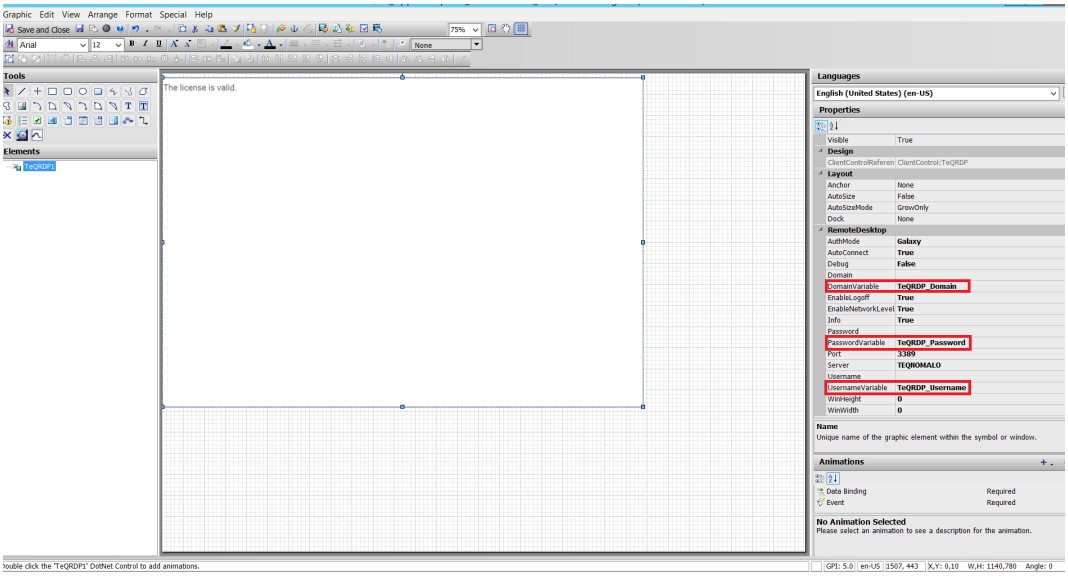


Figure 25-Set Varables names

Step 6

In this step, we design a login form symbol with 3 fields: domain, username and password, and a login button.

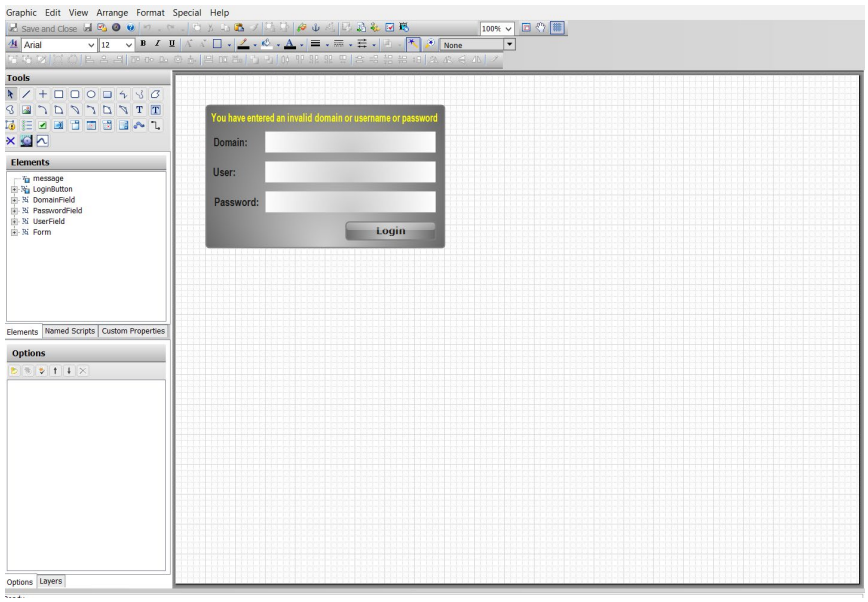


Figure 26-Login Form

Step 7

Next, create 3 string custom properties: DomainValue, UsernameValue and PasswordValue

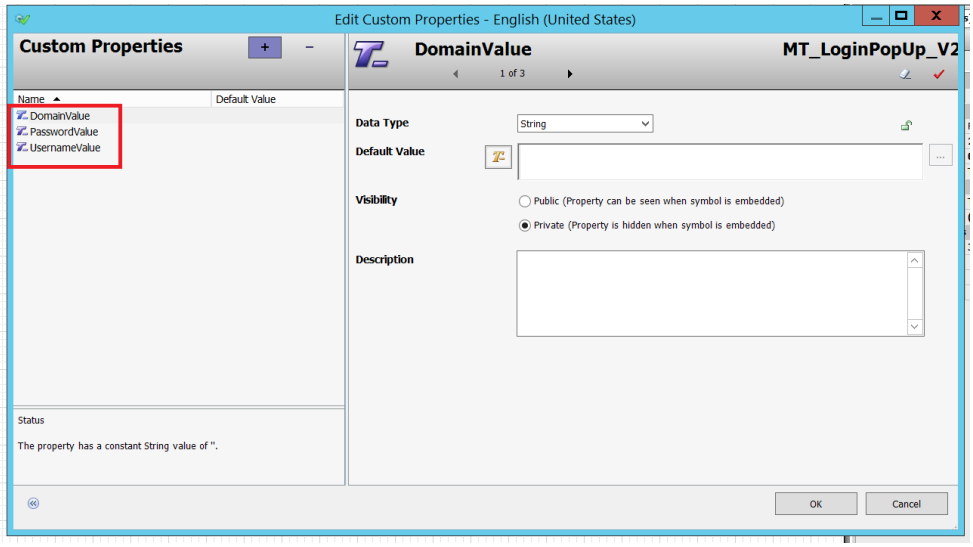


Figure 27-Login Form Symbol Custom Properties

Step 8

Now, add User Input Animation for each input and reference to related custom property.

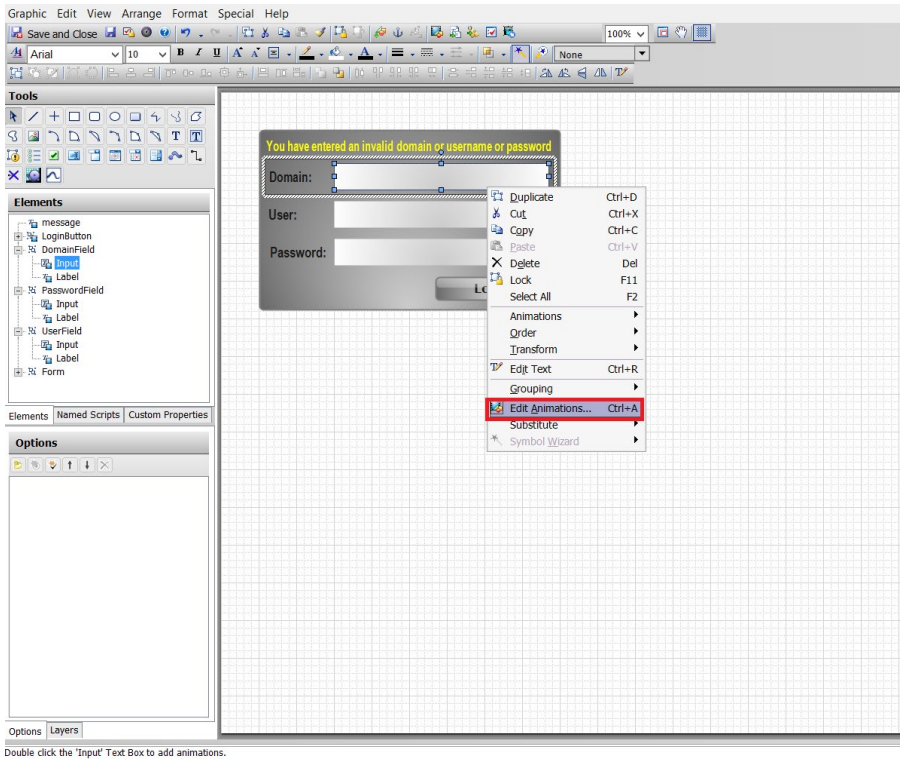


Figure 28-Edit Animation

For Domain input, add User Input Animation and reference to DomainValue custom property.

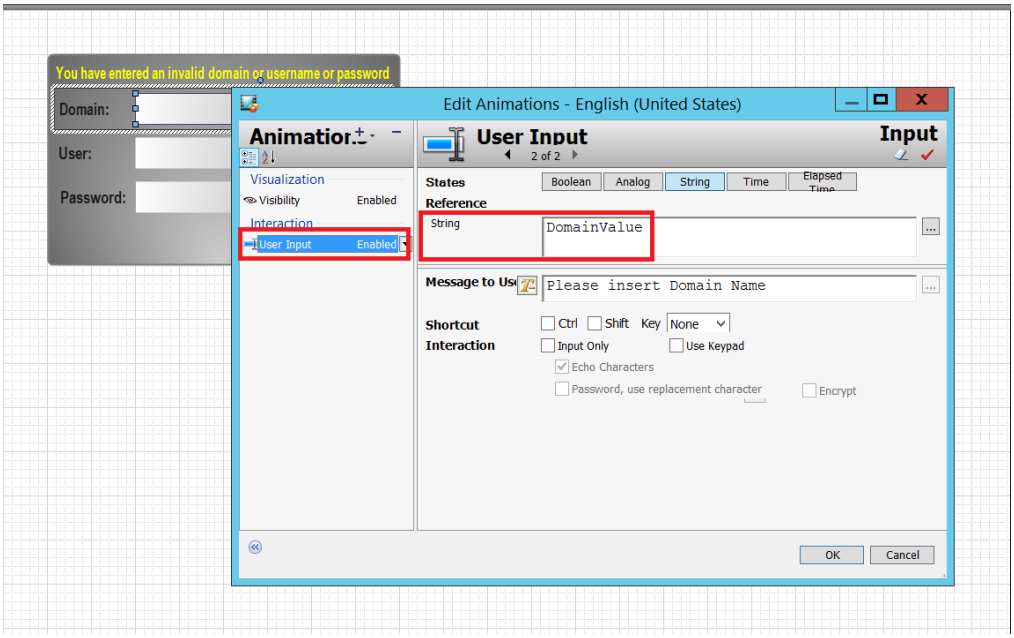


Figure 29-Domain Input

As Domain, Username input, add User Input Animation and reference to UsernameValue custom property.

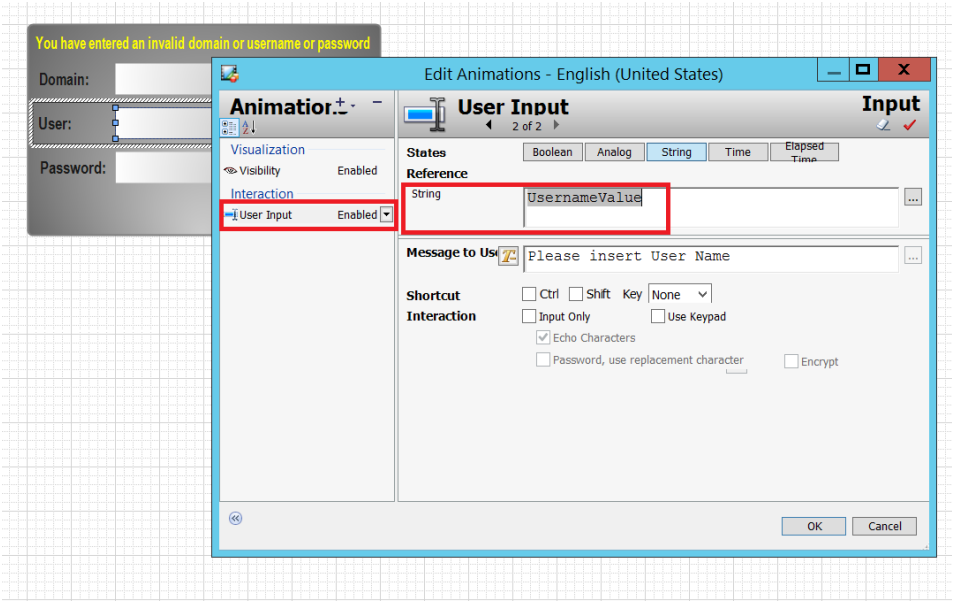


Figure 30-Username Input

And for the Password, create a User Input and reference to PasswordValue and for security reason check Input Only, Echo Character and Use replacement character checkboxes and enter * as replacement character

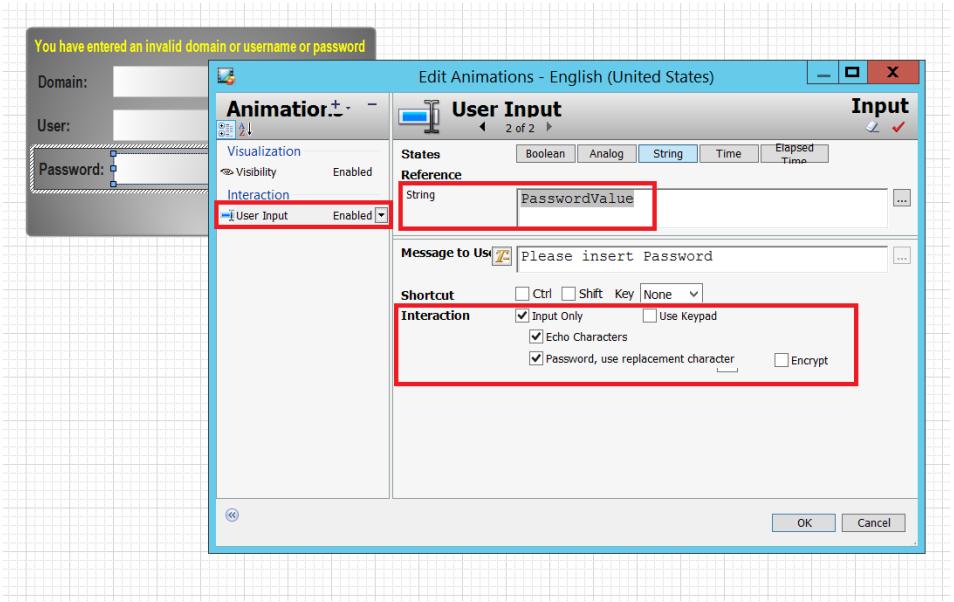


Figure 31-Password Input

Step 9

Next, add an action script on left click that assign value entered in Domain, Username and Password inputs into InTouch corresponding variables.

```
InTouch:$OperatorDomainEntered=DomainValue;

InTouch:$OperatorEntered=UsernameValue;

InTouch:$PasswordEntered=PasswordValue;
```

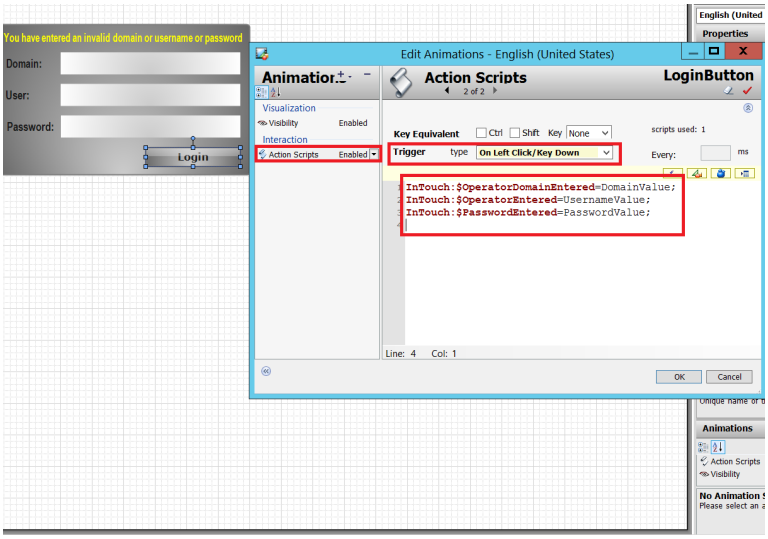


Figure 32-Login Button Action Script

Step 10

Open Action Script Editor and create an Action script that check AccessLevel property in InTouch is not equal zero then write values of Domain, Username and Password into share area variable that was set in Step 5.

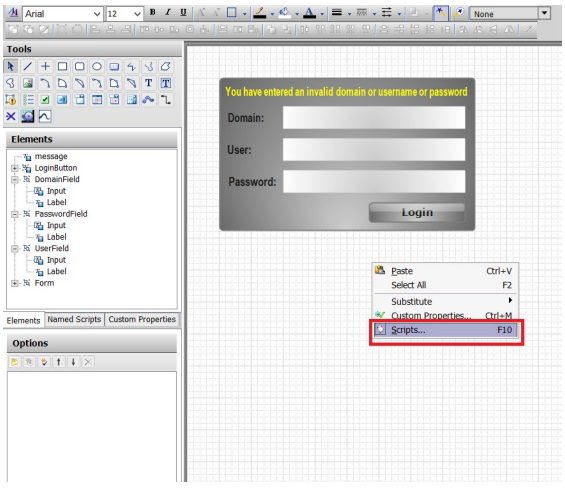


Figure 33-Open Action Script Editor

Add a Script for On DataChange with this Expression InTouch: $AccessLevel <> 0 then this code should run:

```
System.AppDomain.CurrentDomain.SetData("TeQRDP_Domain",DomainValue);

System.AppDomain.CurrentDomain.SetData("TeQRDP_Username",UsernameValue);

System.AppDomain.CurrentDomain.SetData("TeQRDP_Password",PasswordValue);
```

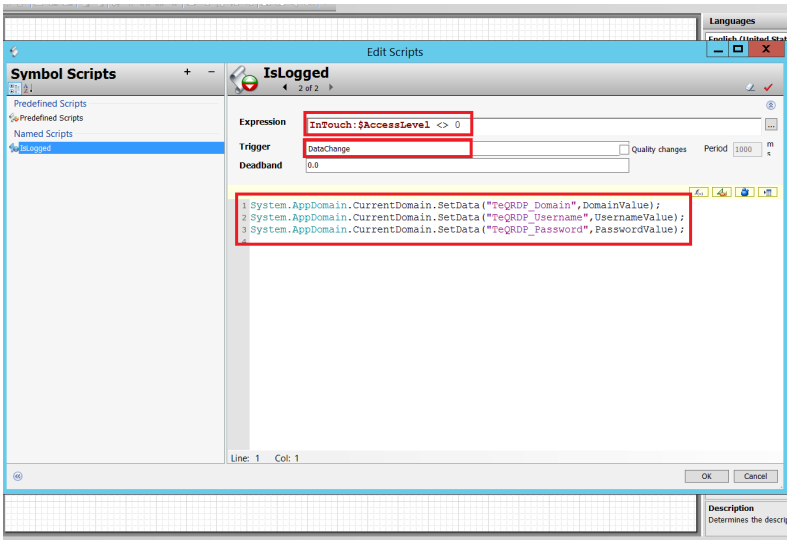


Figure 34-Add an Action Script

Step 11

Click Save and Close button.

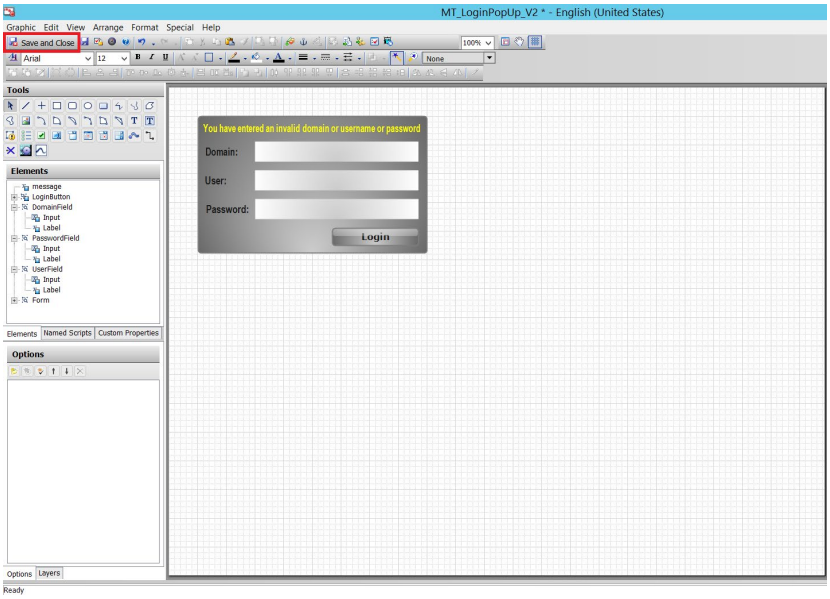


Figure 35-Login Save and Close

Step 12

Create a Logout button symbol with a Boolean custom property:

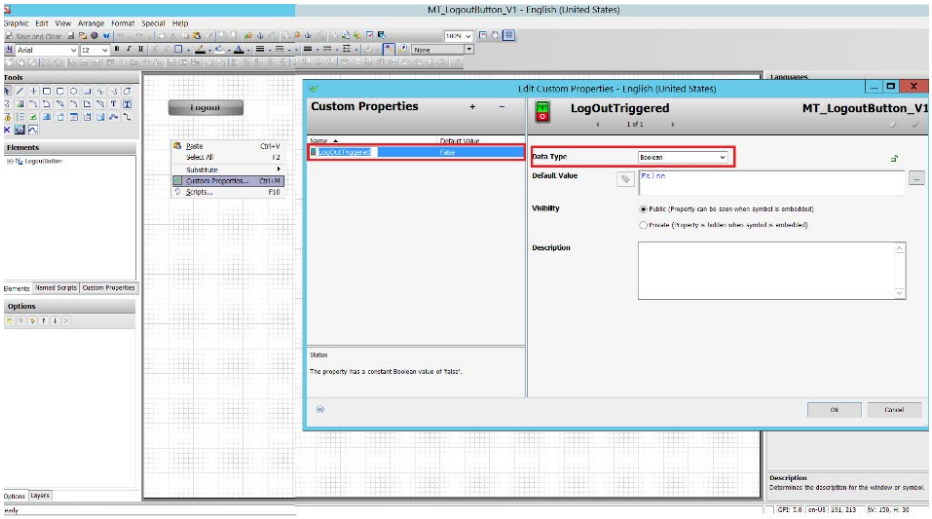


Figure 36-Logout Custom Property

Step 13

Open Edit Animation and insert this action script that when click on logout button would be unset the Username and Password in the share area variable that was set in Step 5.

```
System.AppDomain.CurrentDomain.SetData("TeQRDP_Domain","");

System.AppDomain.CurrentDomain.SetData("TeQRDP_Username","");

System.AppDomain.CurrentDomain.SetData("TeQRDP_Password","");

LogOutTriggered = true;
```

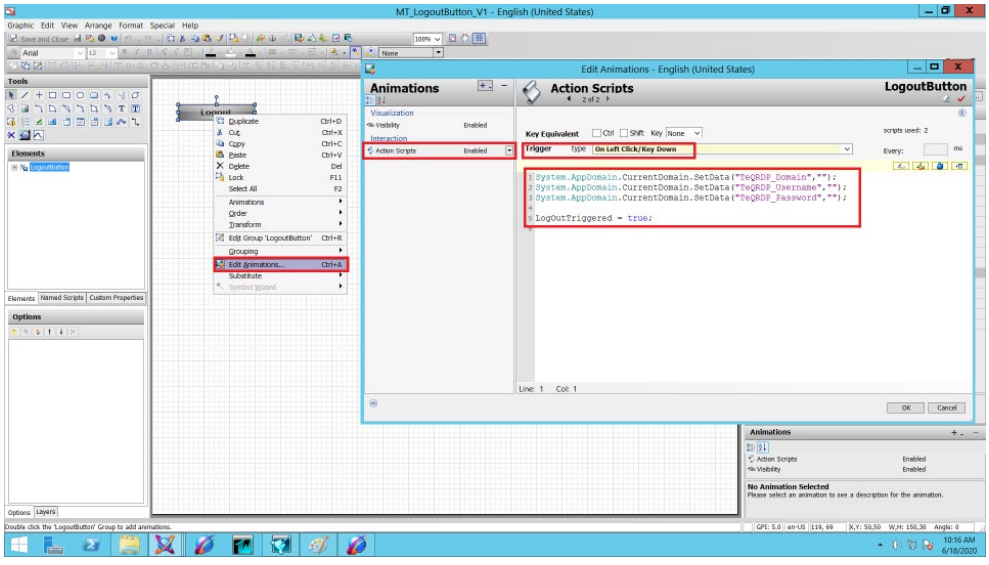


Figure 37-Logout Action Script

Step 14

Click on Save and Close button.

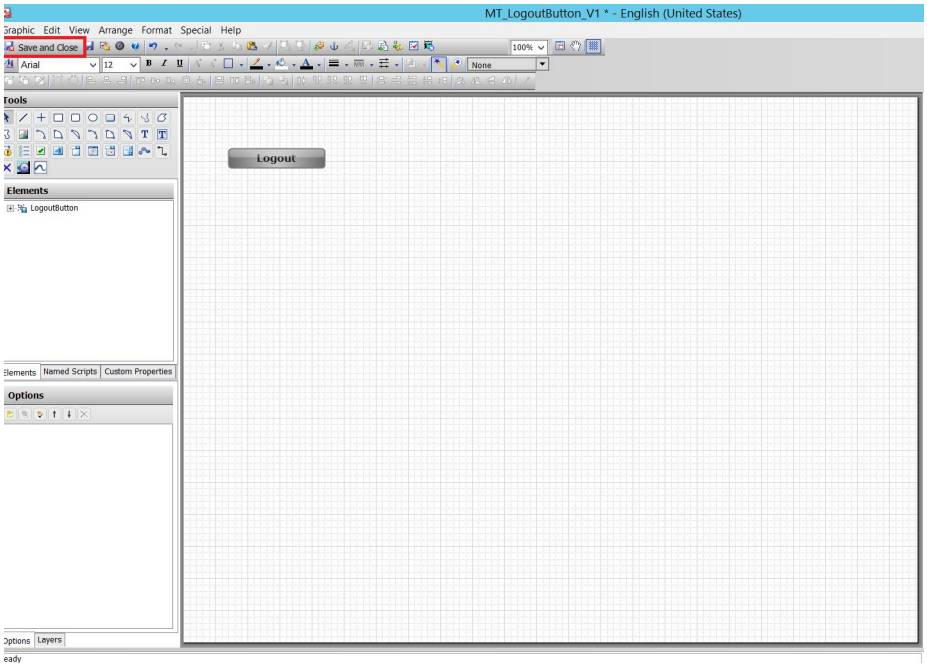


Figure 38-Logout Save and Close

Step 15

Open Intouch and set InTouch security in ArchestrA type in Special > Security > Select Security Type > ArchestrA

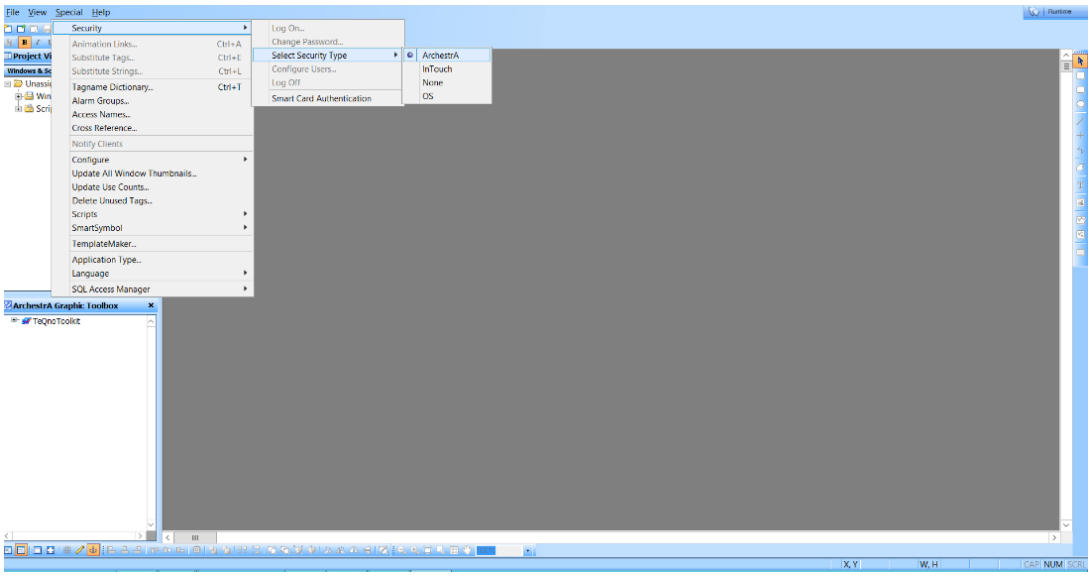


Figure 39-InTouch Security

Step 16

Create a popup window and add the Login Form symbol and logout button.

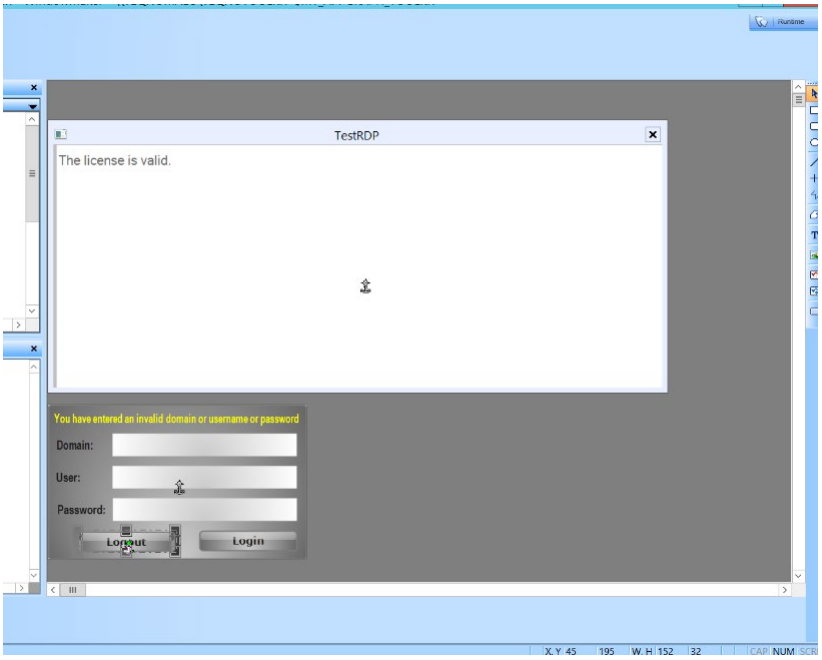


Figure 40-Window with Login form and Logout button

- **Note:** All login/logout features demonstrated in this procedure is just an example as there are multiple methods to login/logout via InTouch/ArchestrA, etc. Feel free to contact TeQnovation (info@teqnovation.com) for further support on the login/logout features.