Deltek

Deltek Costpoint® 8.0

Extensibility Designer Quick Start Guide

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Contents

Introduction

This quick start guide is designed to help you learn the basic steps in creating and deploying extensibility. Refer to other documentation for deeper or more detail discussion of the subject.

- *Deltek Costpoint 8.0 Extensibility Designer User Guide*: Navigating and using the Extensibility Designer to create Costpoint extensions
- *Deltek Costpoint 8.0 Screen Customization and Business Logic Extensibility*: Concepts and features of Costpoint extensibility
- *Deltek Costpoint 8.0 Extensibility Designer Coding Guide*: Creating business logic extensions with stored procedures and java classes

General Steps Overview

There are 12 general steps for creating and deploying an extension, divided into the following categories:

- Checking requirements and setting up
- Creating the extension
- Testing the extension
- Packaging the extension
- Deploying the extensibility package to another system
- Verifying the Deployment to the system

Check the Requirements and Set Up Extensibility

Step	Description
1	License Requirement.
2	Enable System for Extensibility
3	Enable Costpoint user for Extensibility Designer

Create the Extension

Step	Description
4	Log In to Extensibility Designer
5	Create a project
6	Create a unit for the project
7	Create an extension

Test the Extension

Step	Description
8	Test the Extension

Package the Extension

Step	Description
9	Run Export Script
10	Package the Extension

Deploy the Extensibility Package to Another System

Step	Description
11	Run DBWizard tool to deploy the extensibility package

Verify the Deployment to the System

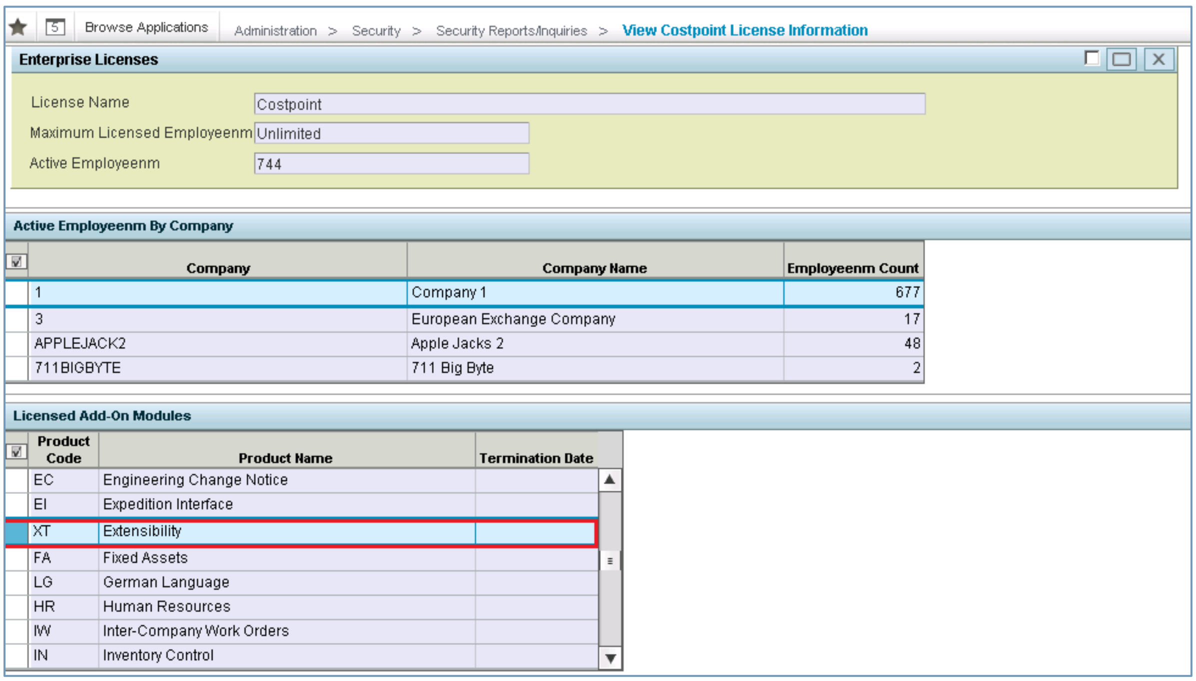
Step	Description
12	Repeat “Step 8: Test the Extension” to verify the extension was successfully deployed to the system in Step 11.

Step 1: License Requirement

You must have the license for Extensibility in order to use the tool.

To verify that you have the Extensibility license:

1. In Costpoint, open the View Costpoint License Information application.
2. In the **Licensed Added-On Modules** grid, verify that there is an entry for Extensibility.



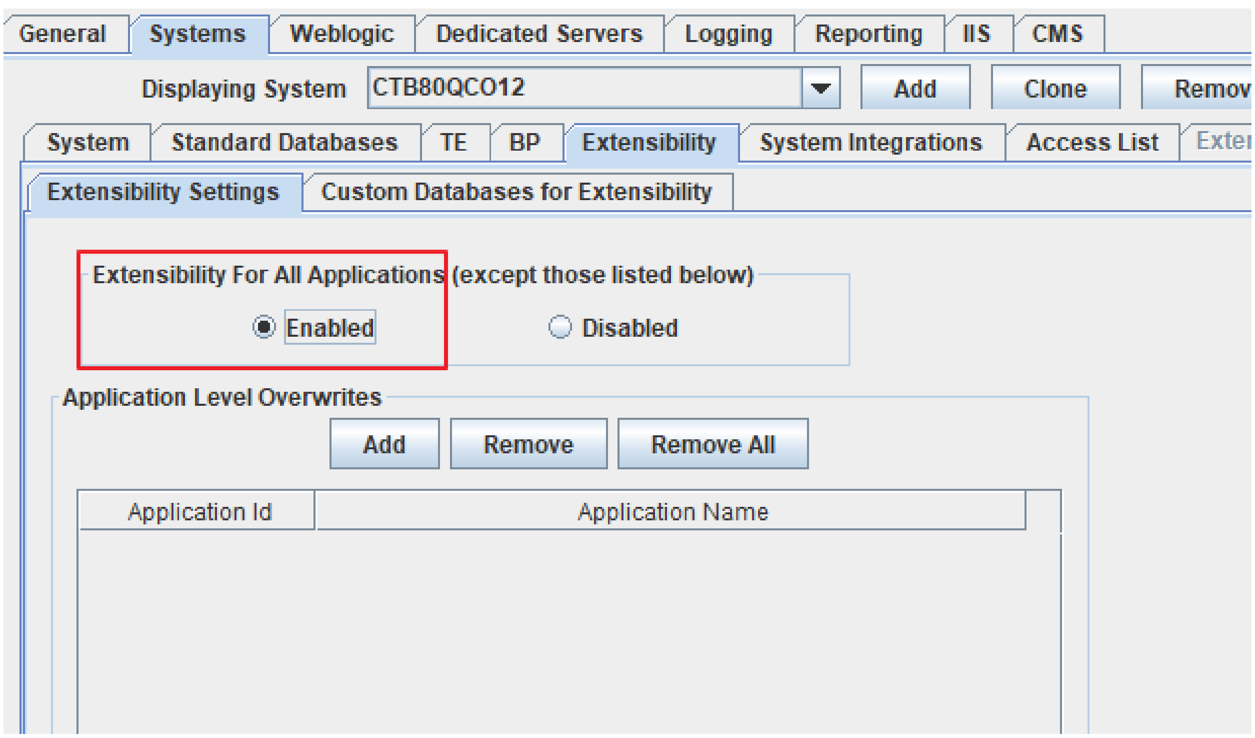
Step 2: Enable System for Extensibility

To enable the system for extensibility:

1. Start the Costpoint Configuration Utility by running **CPWebConfigUtility.cmd** located on the application server in the \deltek\costpoint\80\bin folder.

   Note: Make sure the server is running before you start this utility.

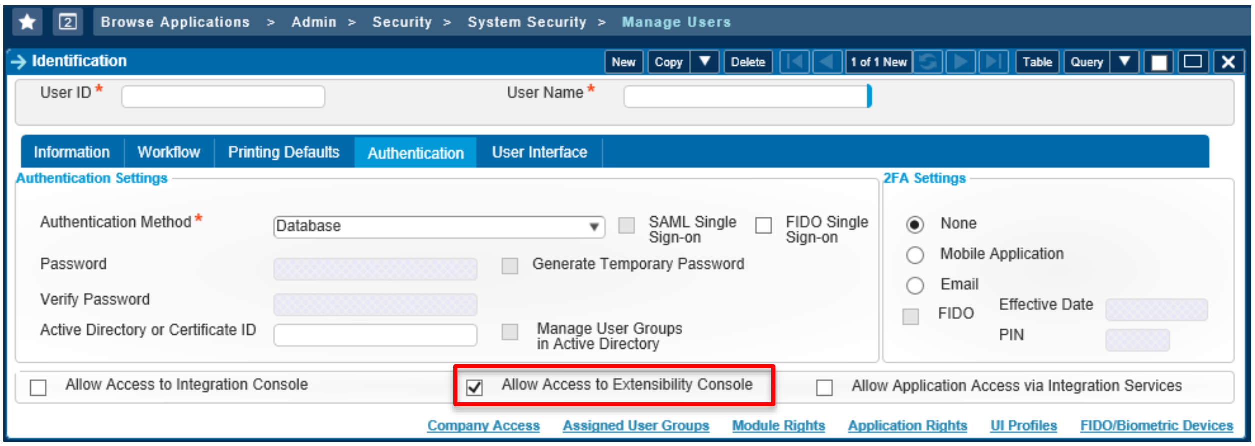
2. Select to configure Costpoint Application Configuration.
3. When the Costpoint Configuration Utility screen displays, perform the following:
   a. Click the Systems tab.
   b. From the **Displaying System** drop-down list, select the appropriate system.
   c. Click the Extensibility tab.
   d. Click **Enabled** to enable the system for extensibility.



Step 3: Enable Costpoint User for Extensibility Designer

To enable a Costpoint user for the Extensibility Designer tool:

1. In the Costpoint system selected in Step 2, open the Manage Users application.
2. Query and select a user that will be using the Extensibility Designer.
3. On the Authentication tab, select the **Allow Access to Extensibility Console** check box.



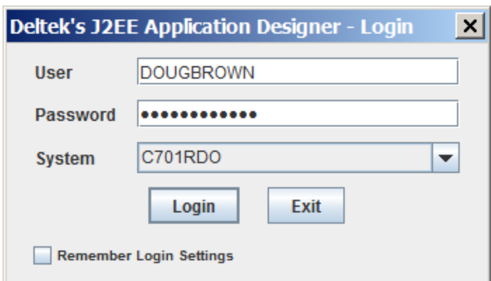
This user can now log in to the Extensibility Designer with their Costpoint user ID and password.

Note: This procedure does not change any security rights for the user within Costpoint. It only allows this user to log in to the Extensibility Designer in order to create customization work.

Step 4: Log In to Extensibility Designer

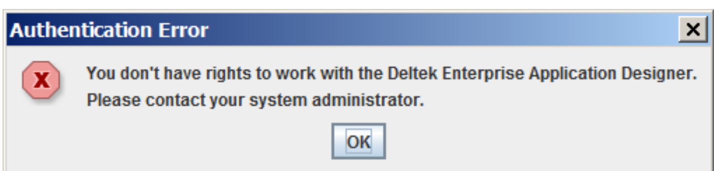
To log in to the Extensibility Designer:

1. Start the Extensibility Designer by running **CPWebExtDesigner.cmd** located on the application server in the \deltek\costpoint\80\bin folder.
2. On the Deltek's J2EE Application Designer – Login dialog box, enter the **User** ID and **Password** for the user enabled in Step 3.



3. Click **Login**.

If the user is not enabled to use the Extensibility Designer, the following message displays.

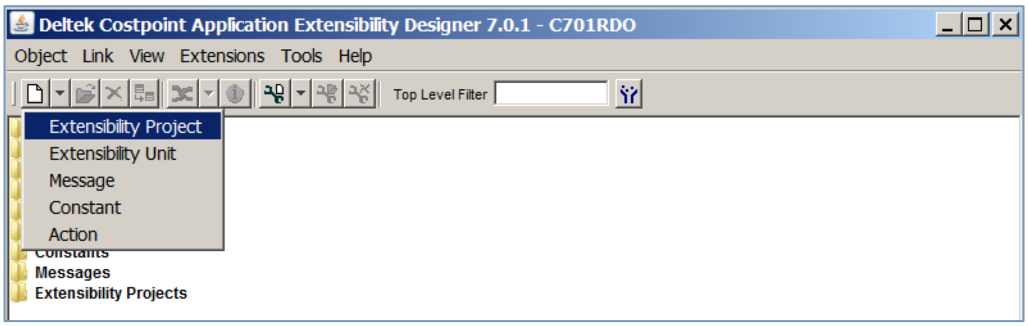


Step 5: Create a Project

A project is an umbrella under which the units created for the project reside. A project does not contain any logic except for tracking and grouping the work done in the Extensibility Designer. A project helps differentiate work done by different companies in case you have contracted customization work out to third-party companies.

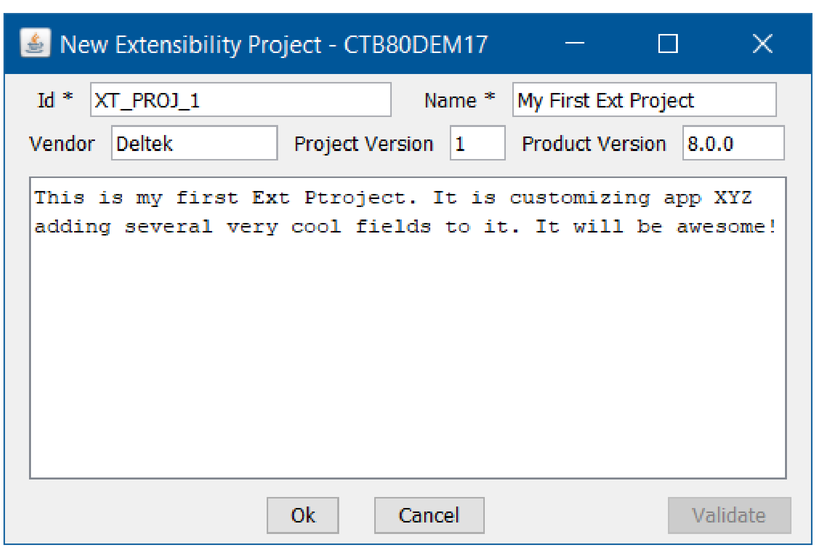
To create a new project:

1. Click the **New** icon, and then click **Extensibility Project** on the shortcut menu, or click **Object » New » Extensibility Project**.

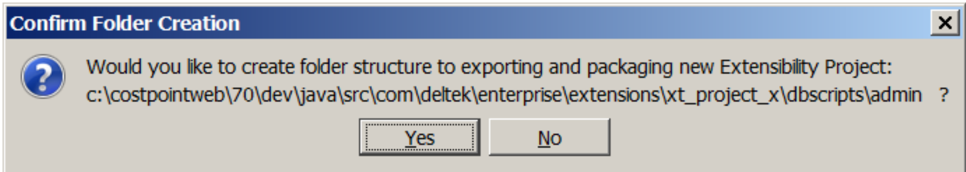


2. On the New Extensibility Project dialog box, enter the following information:
   - **Id**: Enter the new project's ID after the **XT_** prefix. All project IDs must start with **XT_**.
   - **Name**: Enter the name for the new project.
   - **Vendor**: If needed to further identify the new project, enter the name of the third-party software integrator doing the customization for a Costpoint customer.
   - **Project Version**: Enter a version number if you have revision to your customization project in the future.

> **Note:** You should enter some text describing the purpose of the Projects into the notes field. It is a free-form text field.



3. Click **Ok** to save.
4. When asked to create the folder to contain the files for this project, click **Yes**.



The location for the files is not critical as long as the structure starting with **\com** is preserved. In this case, the structure is:

\com\deltek\enterprise\extensions**xt_project_x**\dbscripts\admin, where **xt_project_x** is the project ID

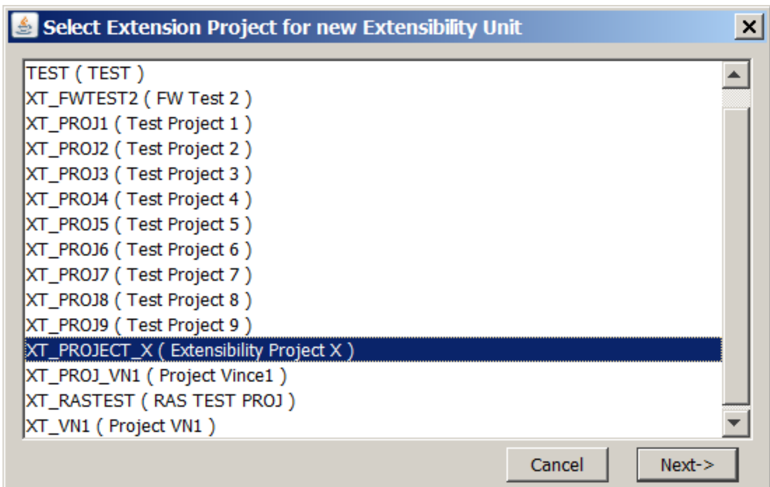
If you develop java classes as part of the extension, the application expects the java package to follow this naming convention, so every package will have unique name.

Step 6: Create a Unit for the Project

An Extensibility Unit contains a set of changes to applications, screens, reports, or processes to be assigned as a whole to user(s) or user group(s) inside Costpoint. If there are different changes to be applied to different users or groups, they should be implemented in separate units.

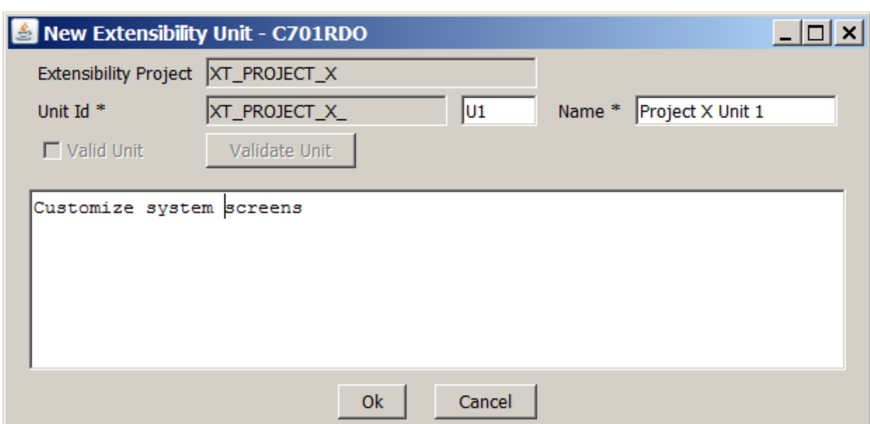
To create a new unit for a project:

1. Click the **New** icon, and then click **Extensibility Unit** on the shortcut menu, or click **Object » New » Extensibility Unit**.
2. On the Select Extension Project dialog box, select the project that will contain this unit, and click **Next**.



3. On the New Extensibility Unit dialog box, enter the **Unit Id** and **Name**.

   A unit ID always starts with the Project ID.
4. In the text field, enter the description of the unit as applicable.



5. Click **Ok**.

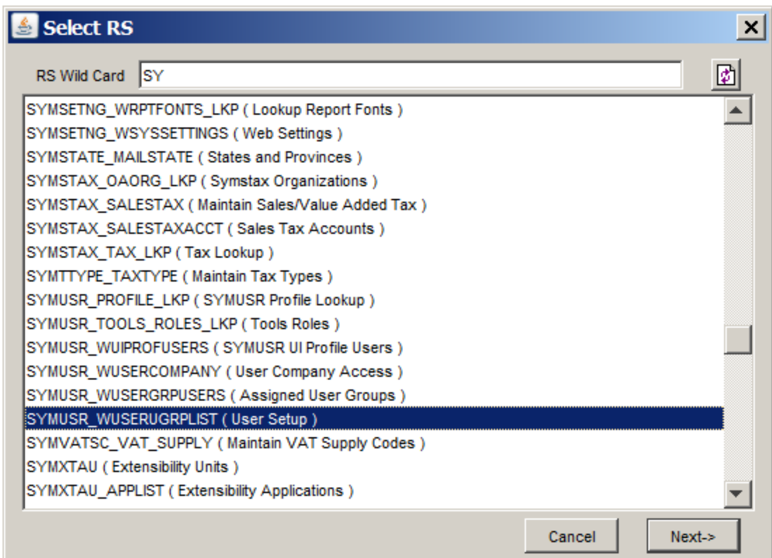
Step 7: Create an Extension

The Extensibility Designer allows you to extend the functionality of an existing result set (a subtask within an application), an action (process), or a report. You can also add brand new Result Set (subtask), action, report, message text, or constants to be used in the extended result set, report, or action. You can even create a brand new custom Application with any number of subtasks.

Each screen in an application is called result set (RS). In any screen, you can change field labels, field status text, and/or field position. You can change the behavior of a field such as non-required to required, visible to not visible, and so on. You can also add additional data fields to the screen.

To extend a result set:

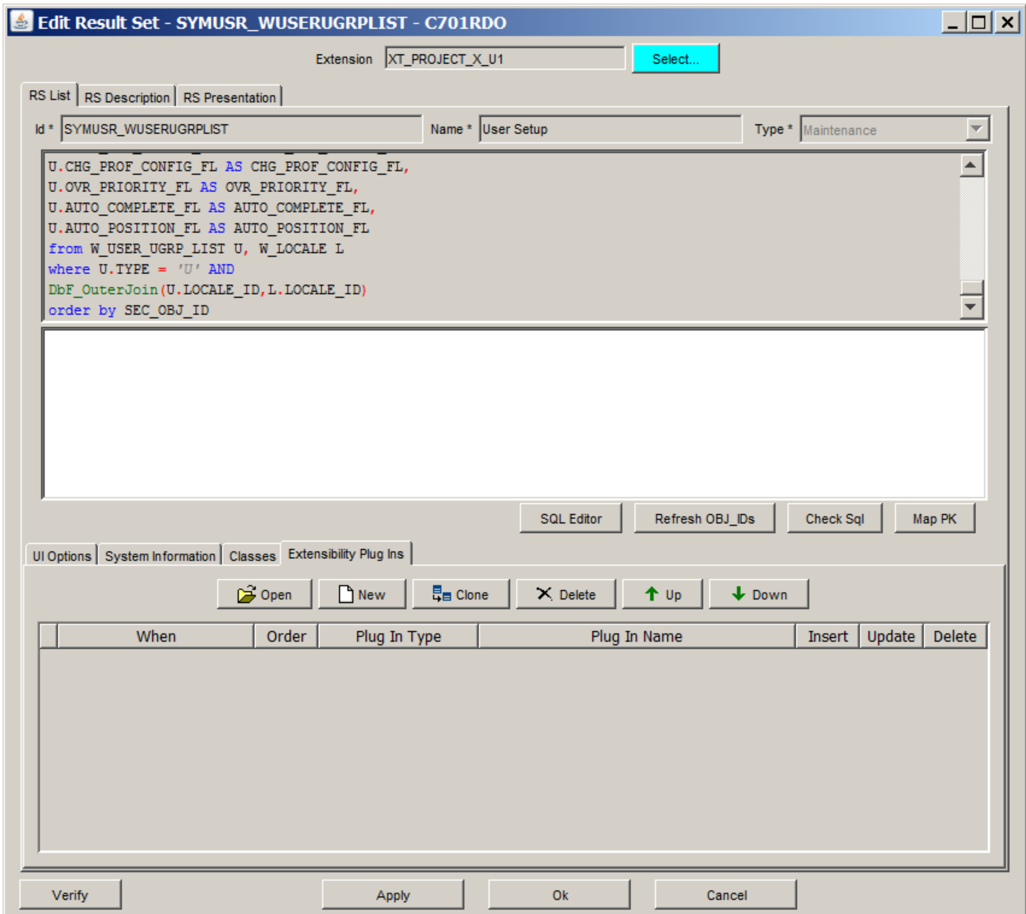
1. Click **Extensions » Extend » RS**.
2. Select the project and unit in which to create the extension.
3. On the Select RS dialog box, select the result set to extend.



Note: Use the **RS Wild Card** field to filter the list of result sets based on the RS ID. Generally, the RS ID starts with the application ID. For example SYMUSR_WUSERUGRLIST is the top level result set for the SYMUSR application (Manage Users).

4. Click **Next**.

5. On the Edit Result Set dialog box, customize the result set.



You can use this dialog box to customize the following: (see Extensibility Designer User Guide for details)

- Change RS title
- Register a stored procedure or additional java classes to be called after Costpoint executes the standard logics. You will need to create the stored procedure or java classes.
- Enable email notifications when certain events happen to the data.
- Add additional data fields
- Change certain attributes for existing fields such as Visible, Editable, Required, Default Value, labels, status text, and so on.

Attention: See the *Deltek Costpoint 8.0 Extensibility Designer User Guide* for more information.

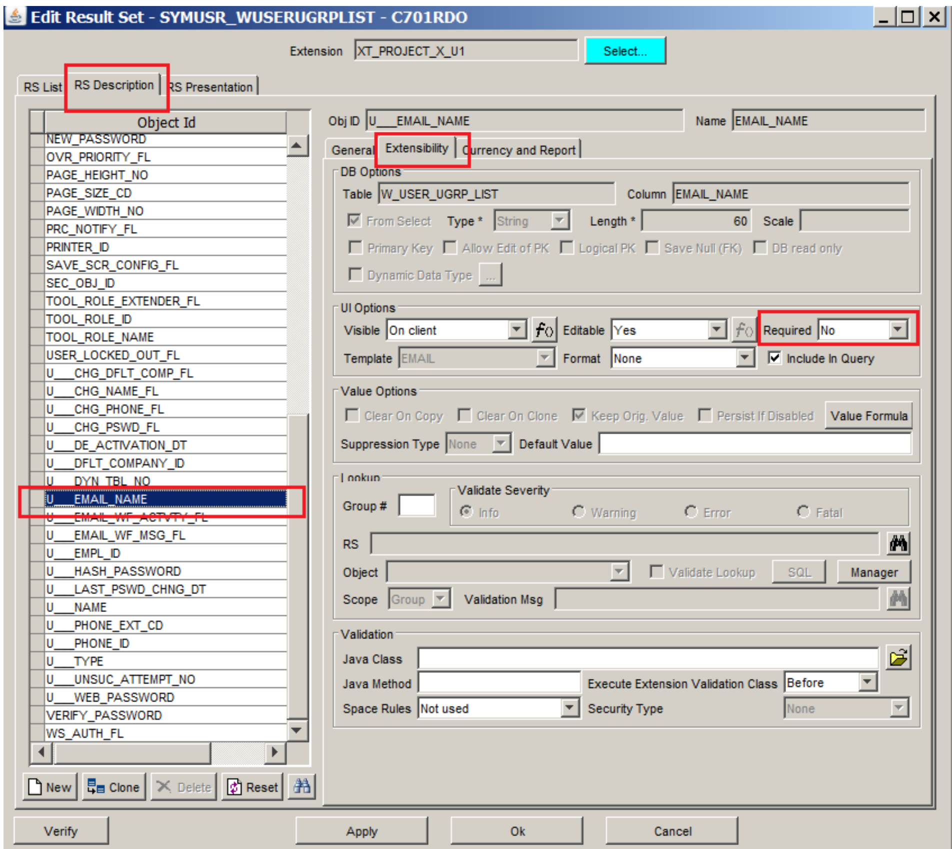
Example

The following example changes the email ID field in the Maintain User application from **Non-required** to **Required**.

To create a result set extension:

1. On the Edit Result Set dialog box, click the RS Description tab.
2. Browse the **Object Id** list in the left panel and select **U_EMAIL_NAME** (the Email Name field).

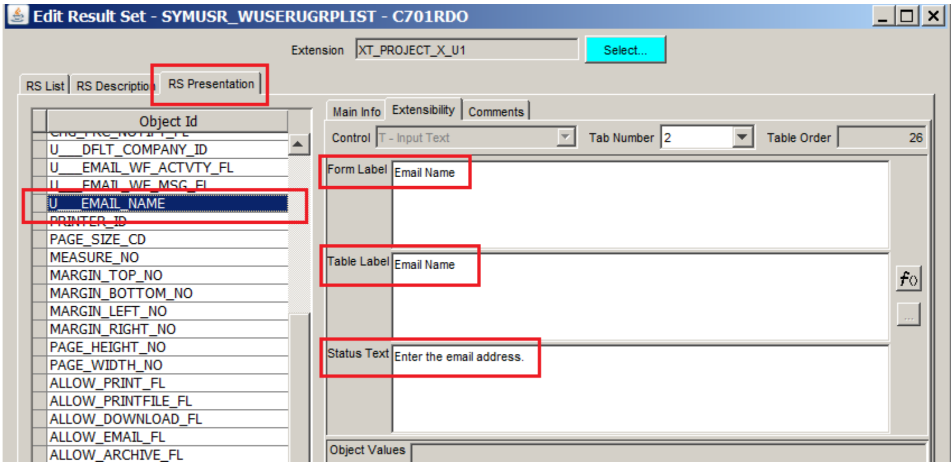
> **Note:** Object IDs on this panel are ordered alphabetically. Object IDs are created by Deltek, so they are not changeable. They are usually named after the column name in the database.



3. To make sure this is the correct object, complete the following steps:
   a. Click the RS Presentation tab.
   b. In the **Object Id** list, select **U_EMAIL_NAME**.

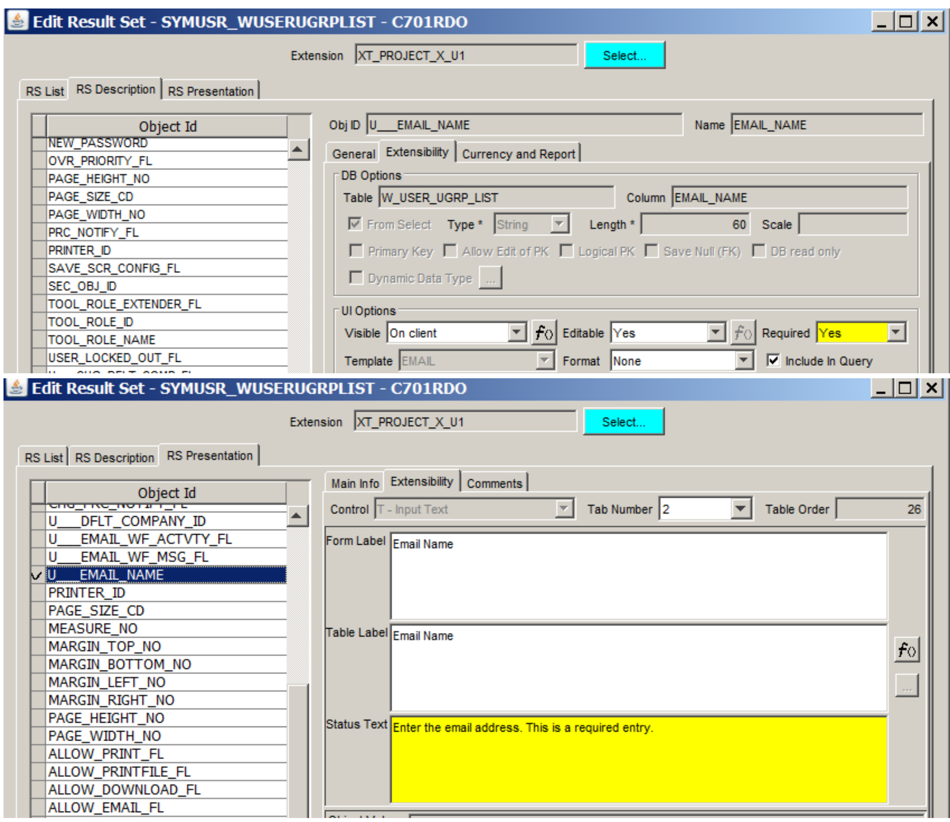
      Objects in this list are generally ordered in the same sequence as the order of columns in table view when viewed in Costpoint.
   c. Verify that the **Form Label**, **Table Label**, and **Status Text** fields contain the appropriate text.

      These are the labels and status text displayed for this field when you are in Costpoint.



4. Click the RS Description tab.
5. In the **Required** drop down list, select **Yes**.
6. Click the RS Presentation tab.
7. Change the **Status Text** to “Enter the email address. This is a required entry.”

   Notice that any changes you make are highlighted in yellow, so you can quickly identify what you have changed.



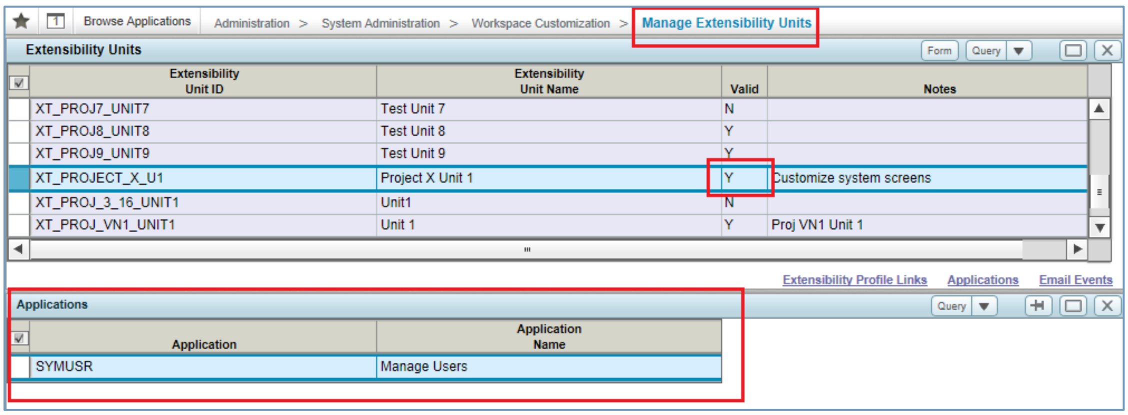
8. Click **OK** to save and close the result set extension.

Step 8: Test the Extension

To test the extension:

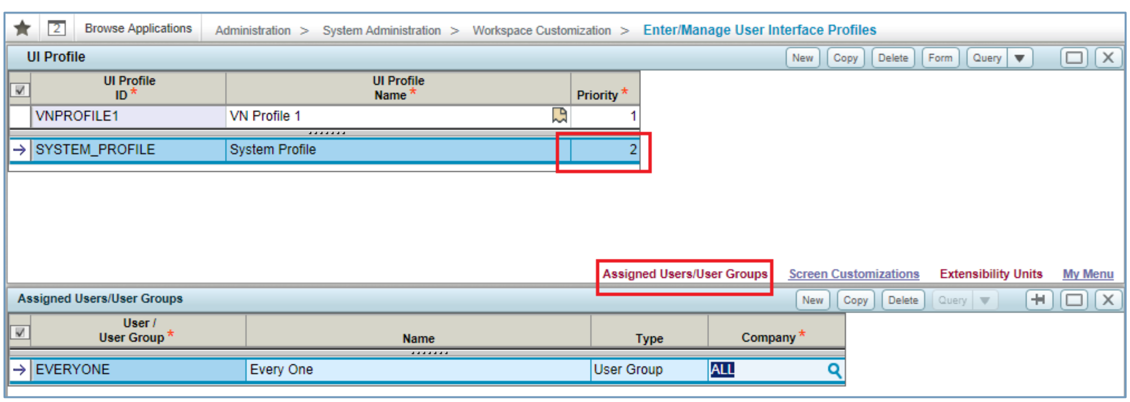
> **Note:** This procedure verifies the result set extension created in the example for the previous step.

1. Log in to Costpoint as Administrator, and go to the Manage Extensibility Units application.
2. Verify that the unit is available and the **Valid** flag is **Y**, and then click the **Applications** subtask to make sure the application(s) shown is correct.



3. In the Manage User Interface Profile application, create a UI profile.
4. Each profile must have a different **Priority** number.

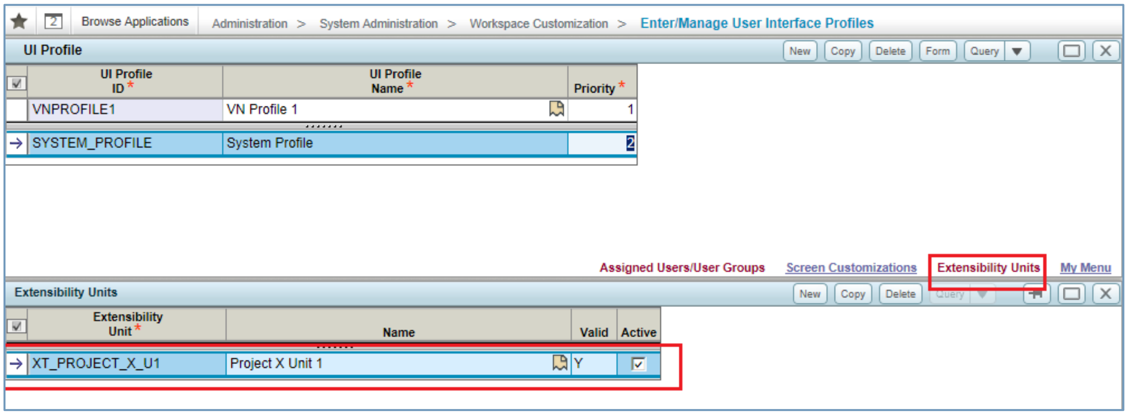
   This number is in case changes are made to the same screen from different units and happen to assign to the same user. The system will resolve this by aggregating the changes. However, some changes cannot be aggregated if they are made on the same object. In such a case, the system will select the changes from the one with the highest priority.



5. Assign the profile to a user group or groups or to a particular user as applicable.

> **Note:** The extensibility feature will only be seen and executed for the user(s) assigned to this profile. If the profile applies to everyone, assign it to the group **EVERYONE**.

6. Click the **Extensibility Units** subtask, and assign the unit to this profile.



7. Save the profile.
8. Log off and log in to Costpoint with the user ID assigned to the UI profile that contains the extensibility changes.
9. Go to the application that has been customized. In this example, the Manage Users application was customized.
10. Verify that the **Email Name** field is now marked as required (with the red asterisk) and the status text at the bottom has been customized with the additional message.

Now, when saving a record without an **Email Name** entry, an error message displays.

Step 9: Export Script

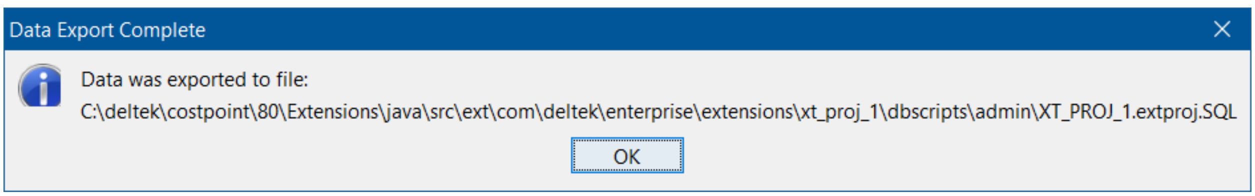
Exporting script is needed if you are creating the extension in a design/development system and want to deploy the extension to a second system (for example, QC or production).

To export the result set extension script for deployment to another system:

1. From the Extensibility Designer main menu, expand the **Extensibility Projects** folder, and select the appropriate project.
2. Click **Extensions » Export Script**.
3. When a dialog box displays confirming the location of the folder where script files will be created, click **OK**.

   Note: This folder was created when you created the project.

4. When a message displays confirming the data has been exported to a SQL file, click **OK**.



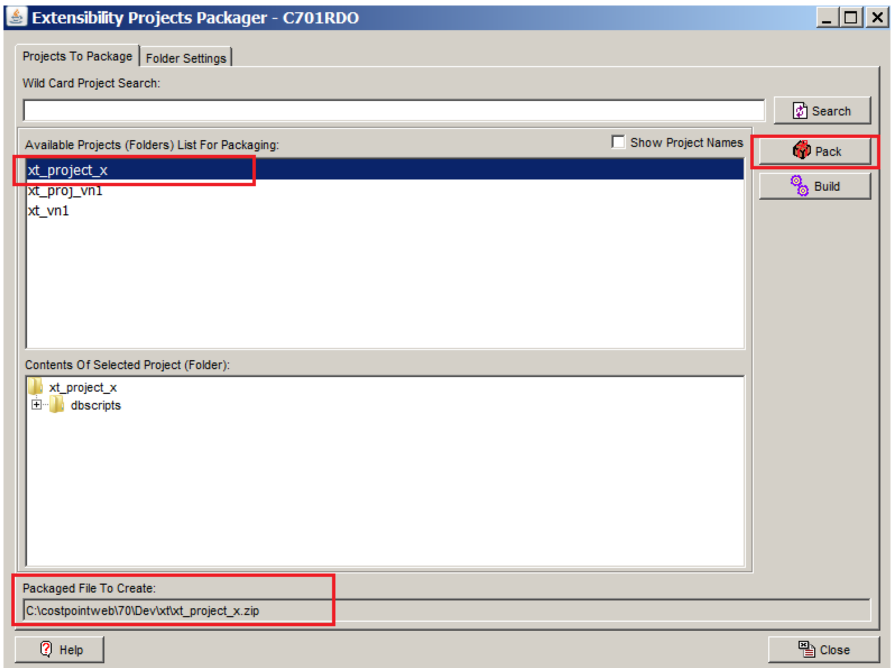
Step 10: Package the Extension

You need to package the extension if you create the extension in a design/development system and want to deploy the extension to a second system (for example, QC or production).

To package an extension for deployment to another system:

1. From the Extensibility Designer main menu, click **Tools » Extensibility Packager**.

   The Extensibility Projects Packager dialog box displays with a list of projects created in this system.

2. Select the project to package.

   The location and name of the zip file to be created displays at the bottom of the dialog box.

3. Click **Pack**.

   A progress dialog box displays, showing the log.

4. Click **Close** when done.

5. Navigate the folder where the extension zip file was created and verify that it is there.

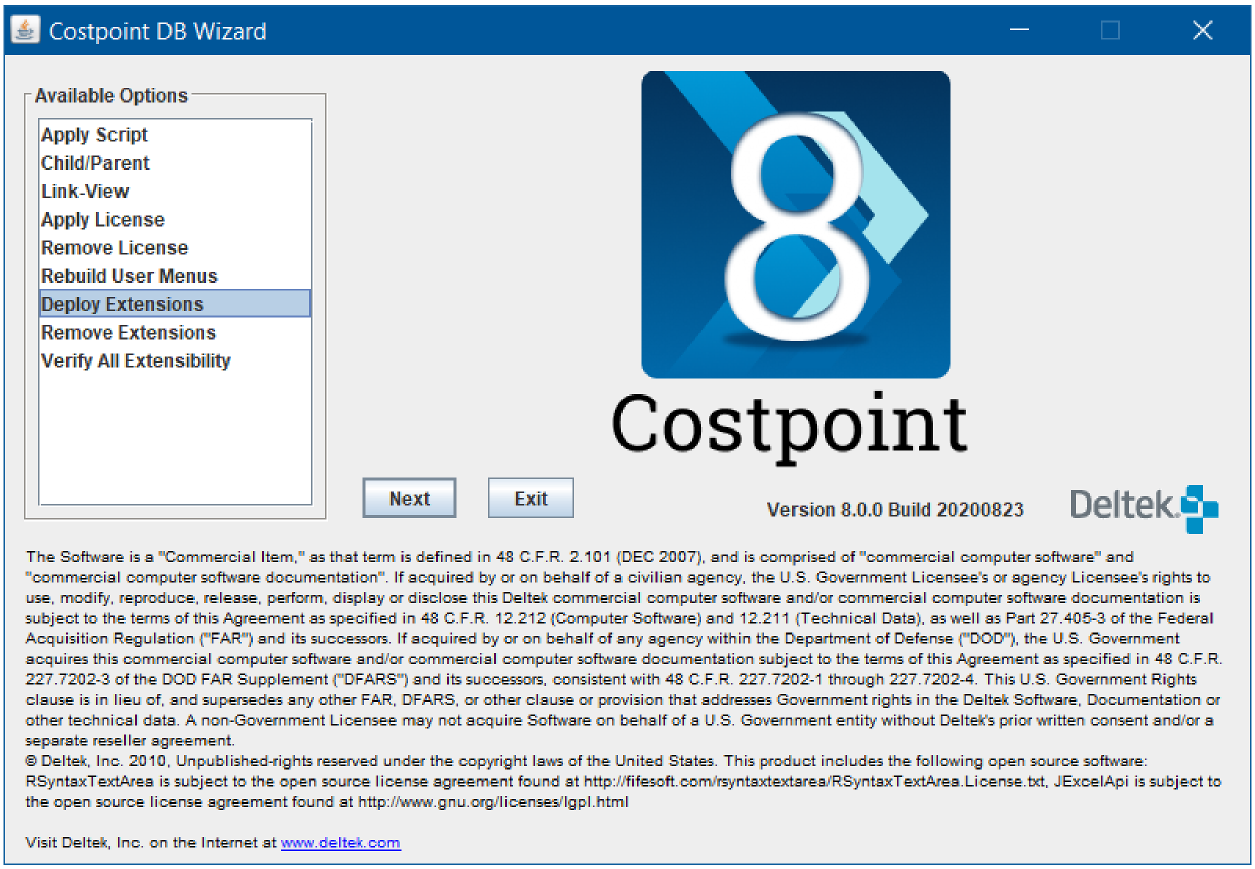
Step 11: Deploy the Extensibility Package

To deploy the extensibility package:

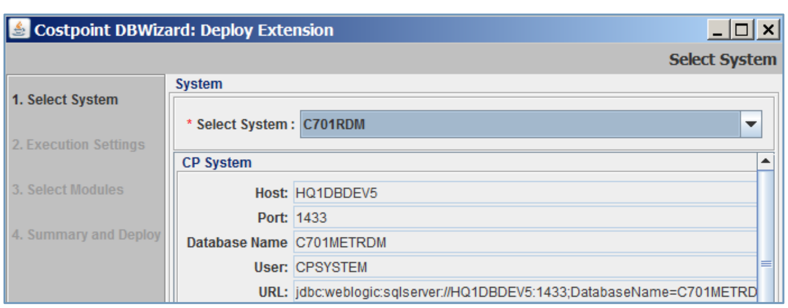
1. On the application server machine for the system where the package is to be deployed, launch the DBWizard tool by running **CPWebDBWizard**. in the \deltek\costpoint\80\bin folder.

   > **Note:** Presumably, this is the QC or production server that is different from the server used for developing the extension.

2. On the Costpoint DB Wizard screen, click **Deploy Extensions**.



3. On the Deploy Extension screen, select the system on which to deploy the package



4. Browse and select the extensibility zip file created in Step 10.

5. Optional. If your package contains a stored procedure, create tables, views, or other database objects SQL scripts to be applied, select the **Deploy Custom DB Scripts** check box.
6. Click **Next » Run** to deploy the package.

   If the Extension contains Java classes, the Weblogic server (or all Weblogic nodes if given deployment has more than 1 server) needs to be restarted to make changes to Java side effective.

Step 12: Verify the Deployment to the System

To verify that the extension was successfully deployed, repeat "Step 8: Test the Extension" for the system in Step 11.

When completed, the extension is ready and active.

Note: If you have application Extensions, Deltek recommends deploying the application or system hotfixes first to your testing environment where you can verify that the hotfix did not change the application in a significant manner, making your Extensions no longer valid or usable. Even though the DBWizard has built in logic to check each Extension Unit against the standard application, some features like screen layouts or your business Java or Stored Procedure plug-ins can be verified only by testing.

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