

# Edit and Re-build Template

IBM Application Runtime Expert for i

Document version: 1.0

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## Preface

Once you have a template created there are many reasons that you may want to refresh this template. Add new plugins, correct false positives, update the core runtime, add new parameters to a plugin, and likely some other reasons. This document assumes you have successfully created your first template. You have learned how to add new collections for a template and adding attributes for a collection. You know the essential concepts about IBM Application Runtime Expert for i (ARE). Otherwise, you need to follow the "Create your first template" at first to create your template.

To modify a template and make it usable, you need to complete two procedures, in general:

1. Edit the template
2. Re-build the template

From this document, you will learn how to edit and re-build your template with deployment template editor.

## 1. Edit your template

### 1. 1. Using plugin's configuration page to edit plugin

The following four steps show you how to edit a template:

Step 1: Login Deployment Template Editor.

**Note:** To login to the deployment template editor, your IBM i user ID should already have \*ALLOBJ

special authority.

Step 2: Select your template.

Select your template from the homepage of Deployment Template Editor. Click on the Action drop-down and select Edit (Figure 1). The Plugin Selection and Customization page (Figure 2) is displayed.

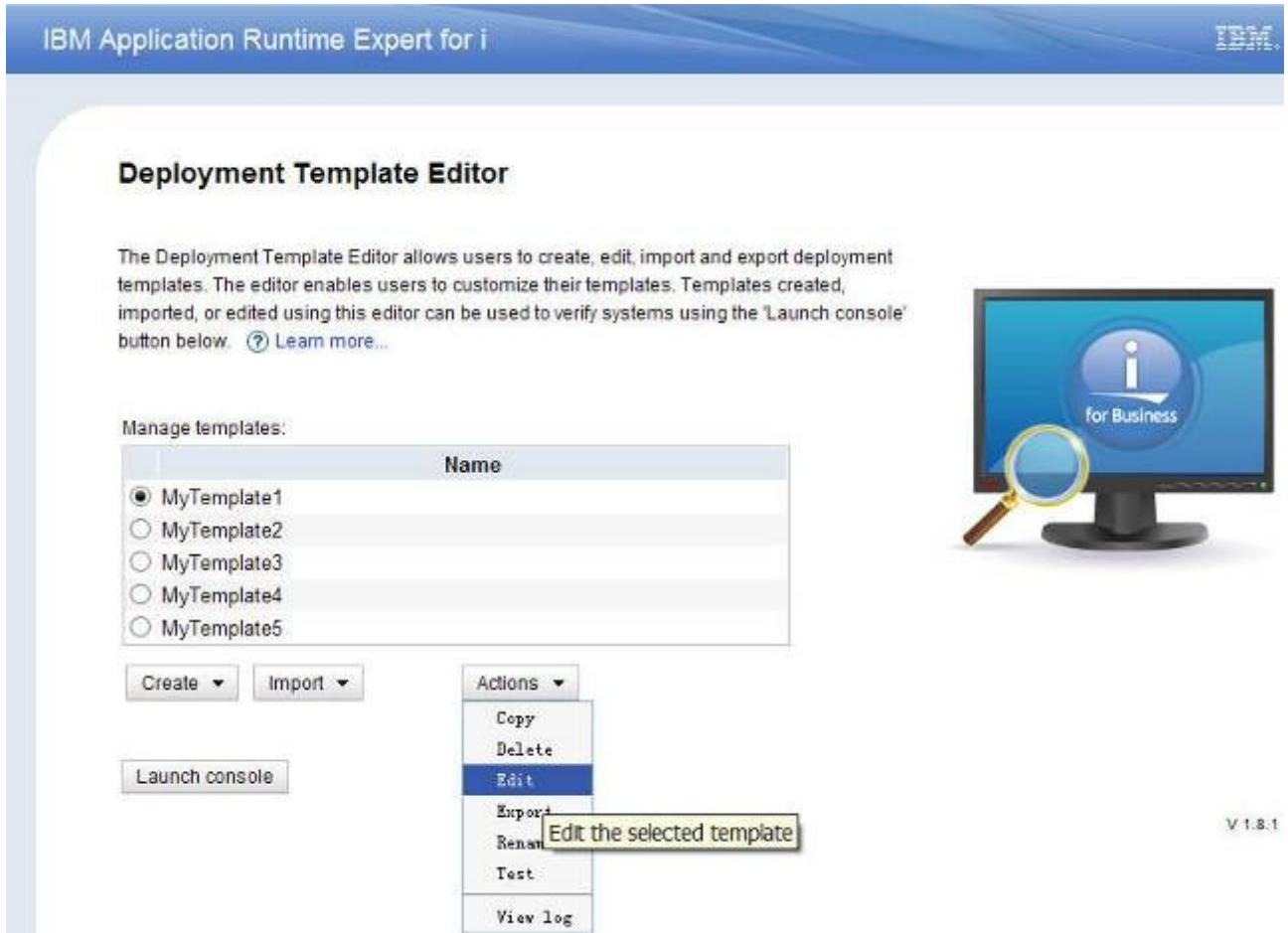


Figure 1: Select your template and click on Edit from Action drop-down

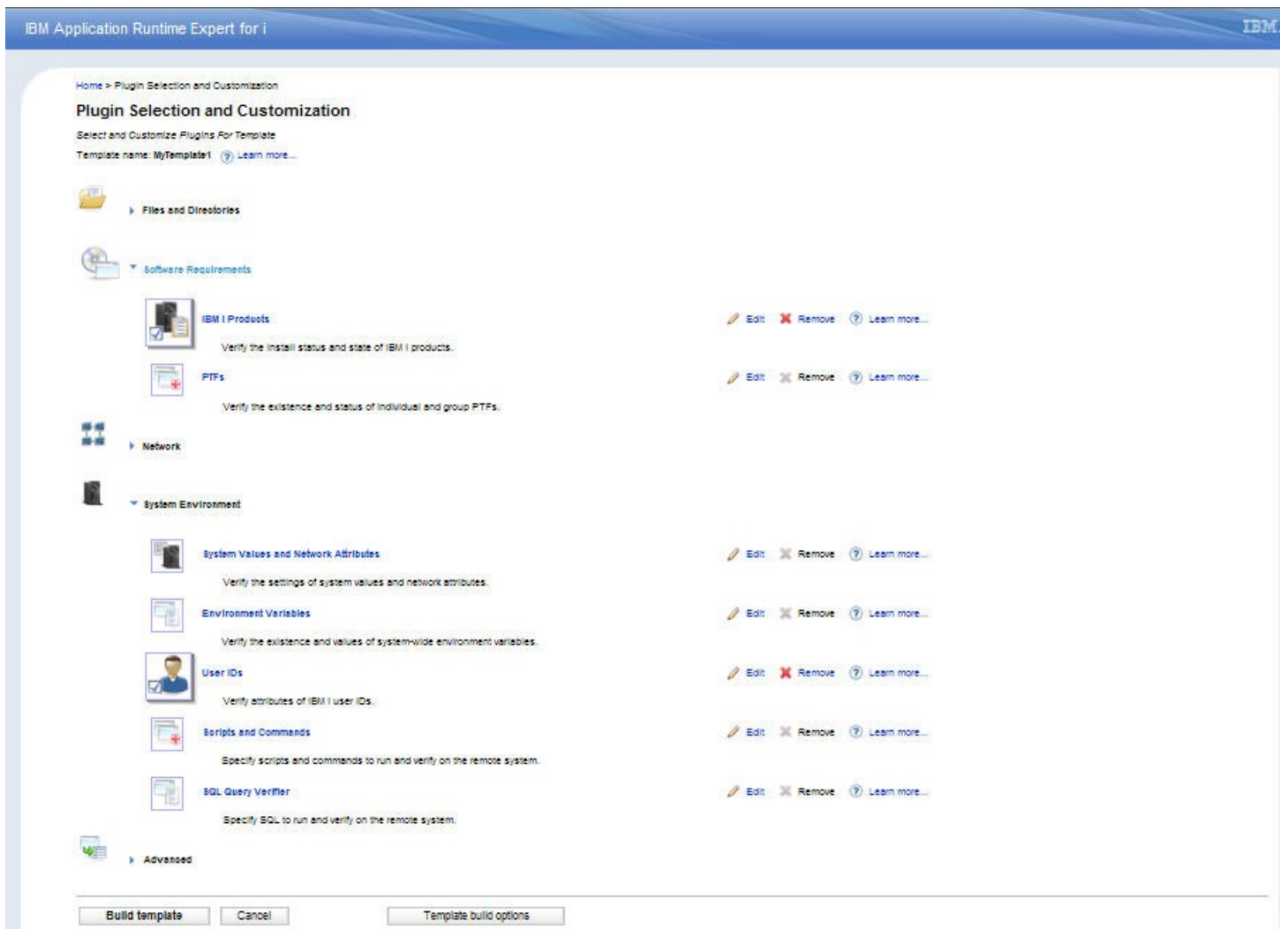


Figure 2: Plugin Selection and Customization page showing the editable plugins.

The Plugin Selection and Customization page shows you all the plugin options available within in ARE. Each plugin that has been used for this template being edited is highlighted and the over all category is open. Each plugin being used is designated by a special image to make customized plugin stand out and highlight the plugin (Figure 3). Due to the differences between major function of plugins, it is recommended that you read related "Learn more..." which is beside the plugin you are interested in, before configuring the plugin.

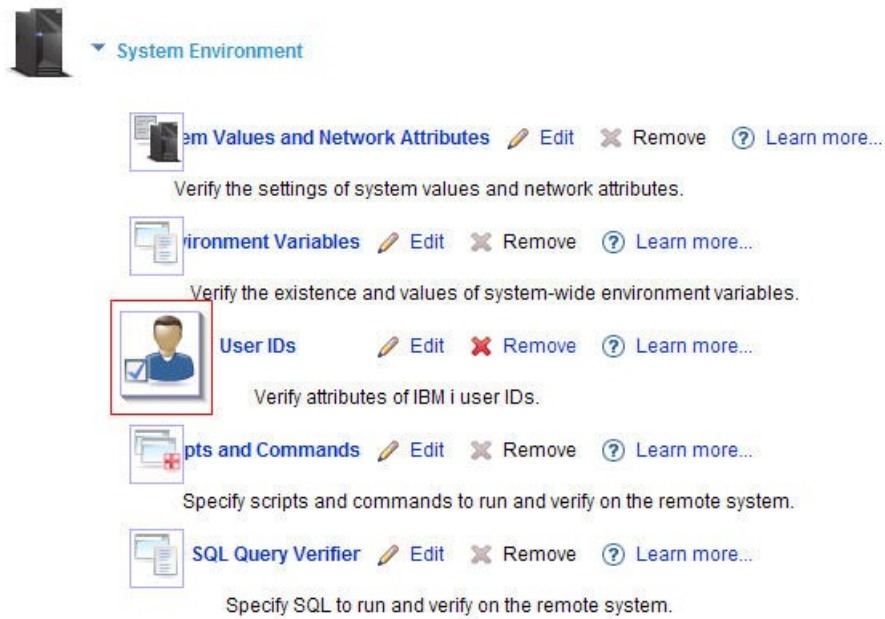


Figure 3: Plugin image designating this plugin is part of this template

Step 3: Select a plugin to edit.

To edit a plugin, you can either click on the image of the plugin, or click on the Edit link for the plugin. For example, clicking the Edit link of User IDs plugin, the User IDs plugin customization page is displayed (Figure 4). After clicking Edit link of User IDs plugin, the User IDs plugin customization page is shown (Figure 5).

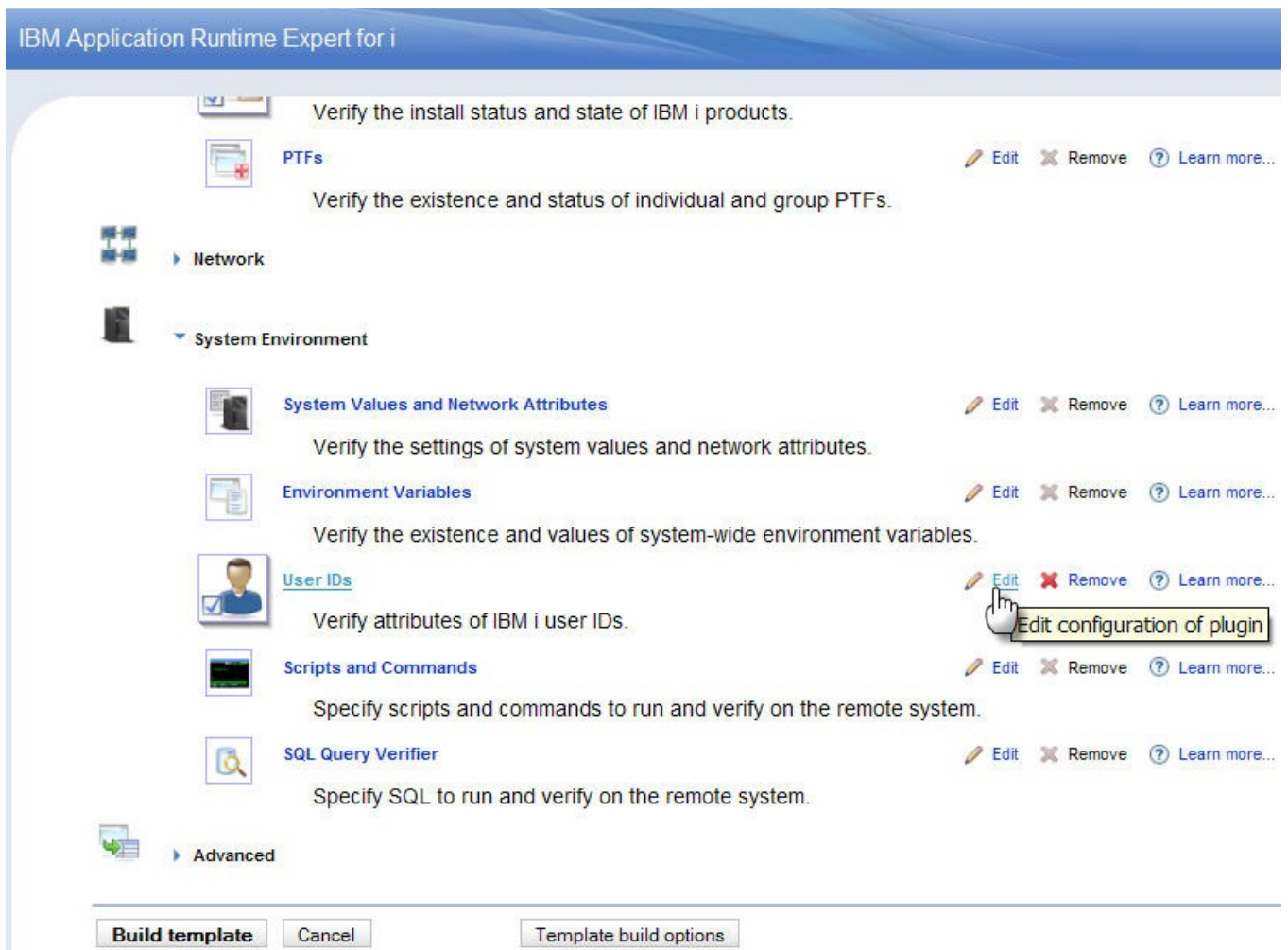


Figure 4: Click on the Edit link for User IDs plugin.

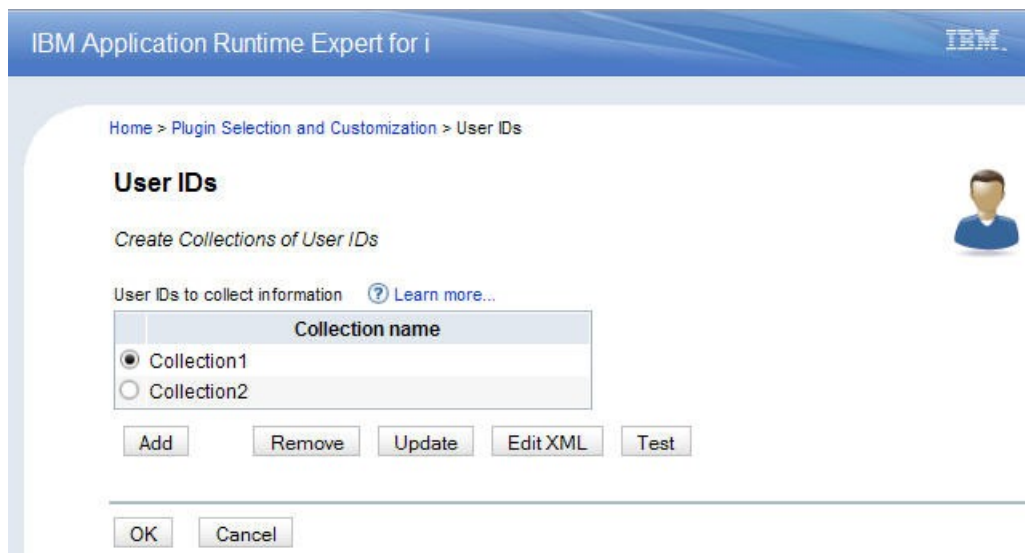


Figure 5: After clicking Edit link for User IDs plugin, the User IDs plugin customization page is shown.

**Tip:** In each plugin's customization page, "Learn more..." is the help text that appears beside each function you're interested in. Before changing configurations of selected plugin, it is recommended that you read related topics to get more detailed information about the functions supported.

In most of the plugin customization pages, you can see the following buttons as well as the User IDs plugin:

**Add:** add a collection of the plugin to verify. A Collection is a grouping of attributes for the selected plugin. For example a collection for the IFS attributes plugin would be a list of IFS directories and files you want to verify.

**Remove:** remove the selected collection

**Update:** Update the selected collection. It provides an easy-to-use user interface to update the content of a selected collection.

**Edit XML:** By editing XML file for the selected collection, you can update your collection as well.

**Note:** Be aware this is a raw XML text editor. You have full access to the XML to make changes, enhancements, or to add custom logic. The changes you make are not verified.

**Test:** Using this button you can immediately verify if the function of selected collection works as well as you expect. Results of the plugin verification are displayed.

**Note:** It is recommended that you use the test button verify the collection that was just changed. It is helpful to expose any unexpected situation without re-build your template. This is very important when you modify the raw XML.

**OK:** Save the changes and leaves this page. After pressing OK button, the plugin selection and customization page is displayed.

**Cancel:** Discard the changes and leave this page. After pressing Cancel button, a confirmation is displayed asking for "OK" or "Cancel" (Figure 6). If you click on OK, it will discard all changes for the plugin and reset back to the plugin selection and customization page. Otherwise, the cancellation does not take effect on this plugin. You will stay on the same page.

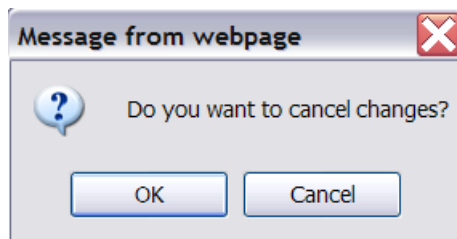


Figure 6: After pressing Cancel button, a dialog box asks for "OK" or "Cancel".

When you select a collection to update, and click Update button, the updating collection page is displayed. For example, select to update "Collection2" for User IDs plugin, click the Update button for the User ID plugin customization page. Then you can update the collection as needed (Figure 7):

Home > Plugin Selection and Customization > User IDs > Edit User ID Collection

## Edit User ID Collection

Select User IDs to Verify

All user IDs on the system [? Learn more...](#)

USER03  
USER04  
USER05  
USER1  
USER10  
USER11  
USER12  
USER13  
USER14  
USER2

User IDs to verify [? Learn more...](#)

USER03  
USER04

Previous Next 9/14

Position to:

Collection name:

Attributes to verify:

- CCSID
- Character ID
- Country ID
- Group Authority
- Group Authority Type
- Group Profile
- Job Description
- Language ID
- Limit Capabilities
- Locale
- Message Queue
- Output Queue
- Owner
- Password is \*NONE
- Special Authority
- Special Environment
- Status
- Supplemental Group
- User Class

Customize

OK Cancel

Figure 7: After pressing Update button, the Edit collection page for User IDs plugin is displayed

Generally, the Edit Collection page has the following buttons:

**OK:** Save the changes and leave this page. After pressing OK button, you get back to the top plugin customization page. (In this example, it's the User IDs plugin customization page.)

**Cancel:** Discard the changes and leave this page. After pressing Cancel button, a cancellation box is displayed asking for "OK" or "Cancel". If you click on OK, it discards all changes about this collection and resets back to the top plugin customization page. Otherwise, the cancellation does not take effect on this collection. You will stay on the Edit Collection page.

**Step 4 (Optional):** Remove all the configurations for a plugin that has been configured.

When you want to remove all the configurations for a plugin that has been configured, click the Remove link option (Figure 8). A confirmation box displays and asking if you want to remove the configuration for this plugin. Taking this option will remove all the verification for this plugin from this template.

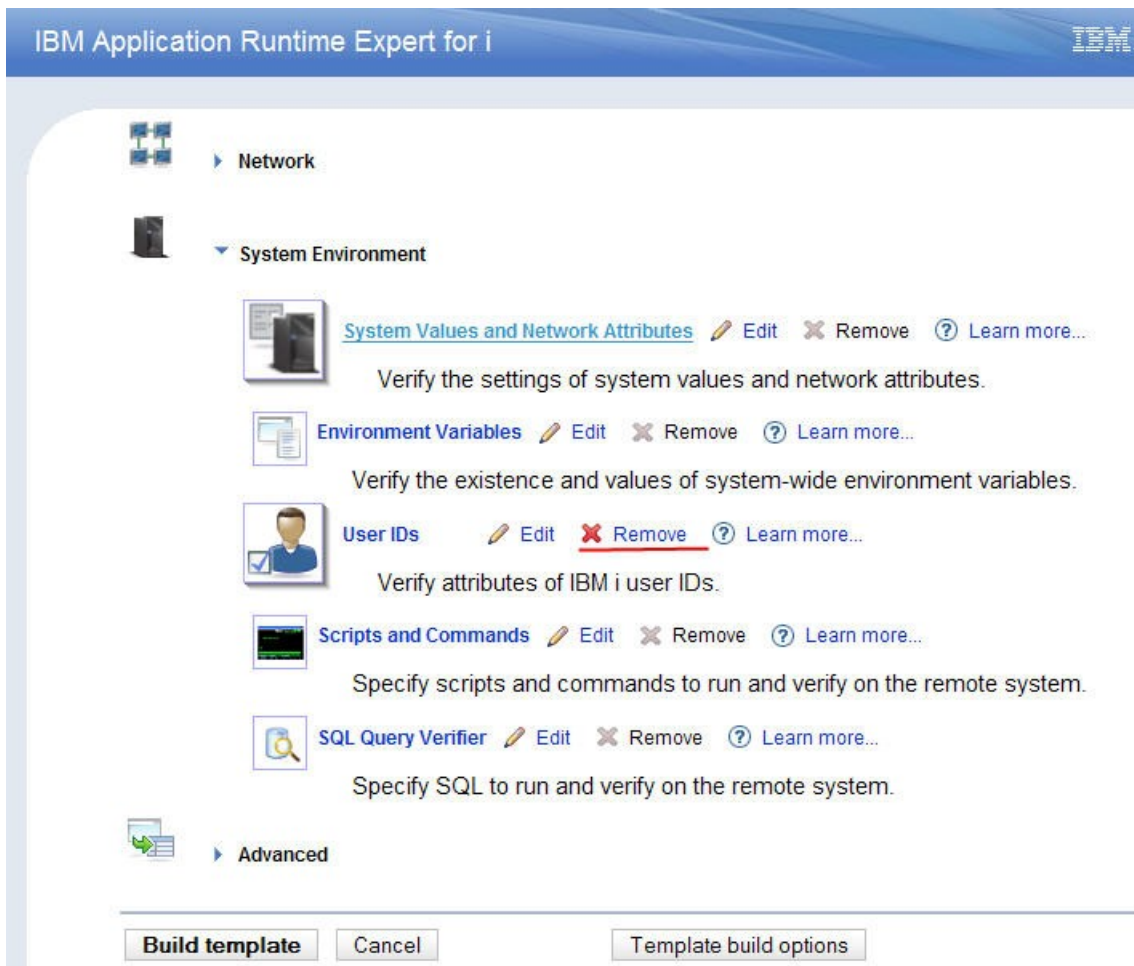


Figure 8: Click "Remove" option to remove all the configurations of User IDs plugin.

After editing specified plugins, you can go on the next step to rebuild your template. We'll introduce re-build template function to you in subsequent parts of this document (See section 2: Re-build your template).

## 1. 2. Edit plugin's configuration using edit XML content for a plugin

In this topic, we'll introduce you to the XML editor. This is another way to edit plugin's configuration, change attributes, add values, or include customized logic. In some cases, your system environment may experience minor maintenance or tuning, some system attribute values are changed and you need to update corresponding expected values defined in your template to reflect these updates. Edit the XML content of plugin defined in a template provides another way for advanced users to editing their template.

**Note:** This piece assumes that you are familiar with XML and have an understanding the impacts of editing on the result.

To enter XML editor for a selected collection, just click Edit XML button on the plugin customization page (Figure 9). The XML editor is displayed (Figure 10).



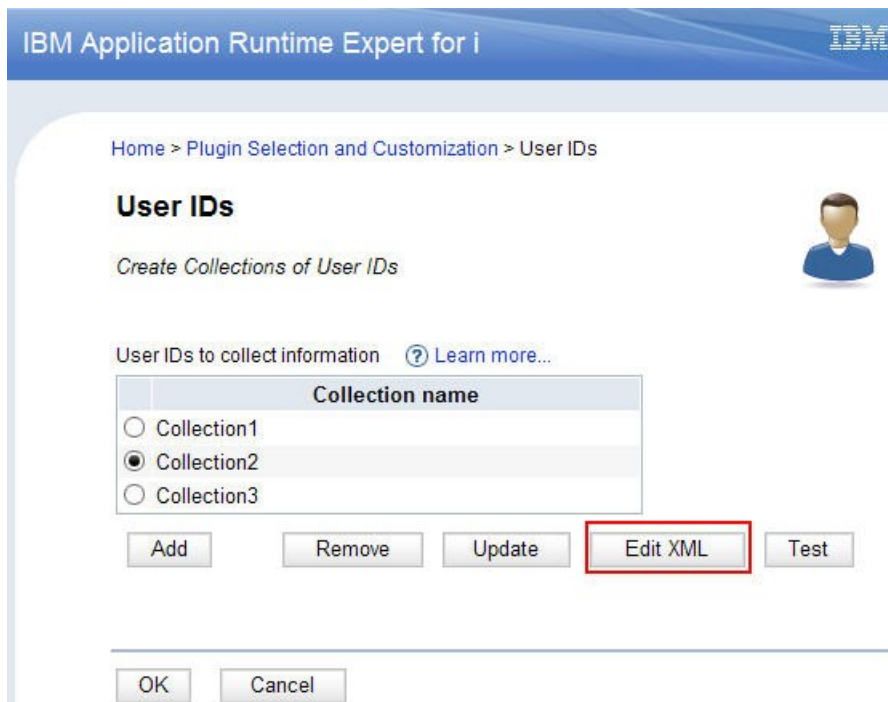


Figure 9: Clicking Edit XML button for the Collection2 in User IDs plugin customization page.

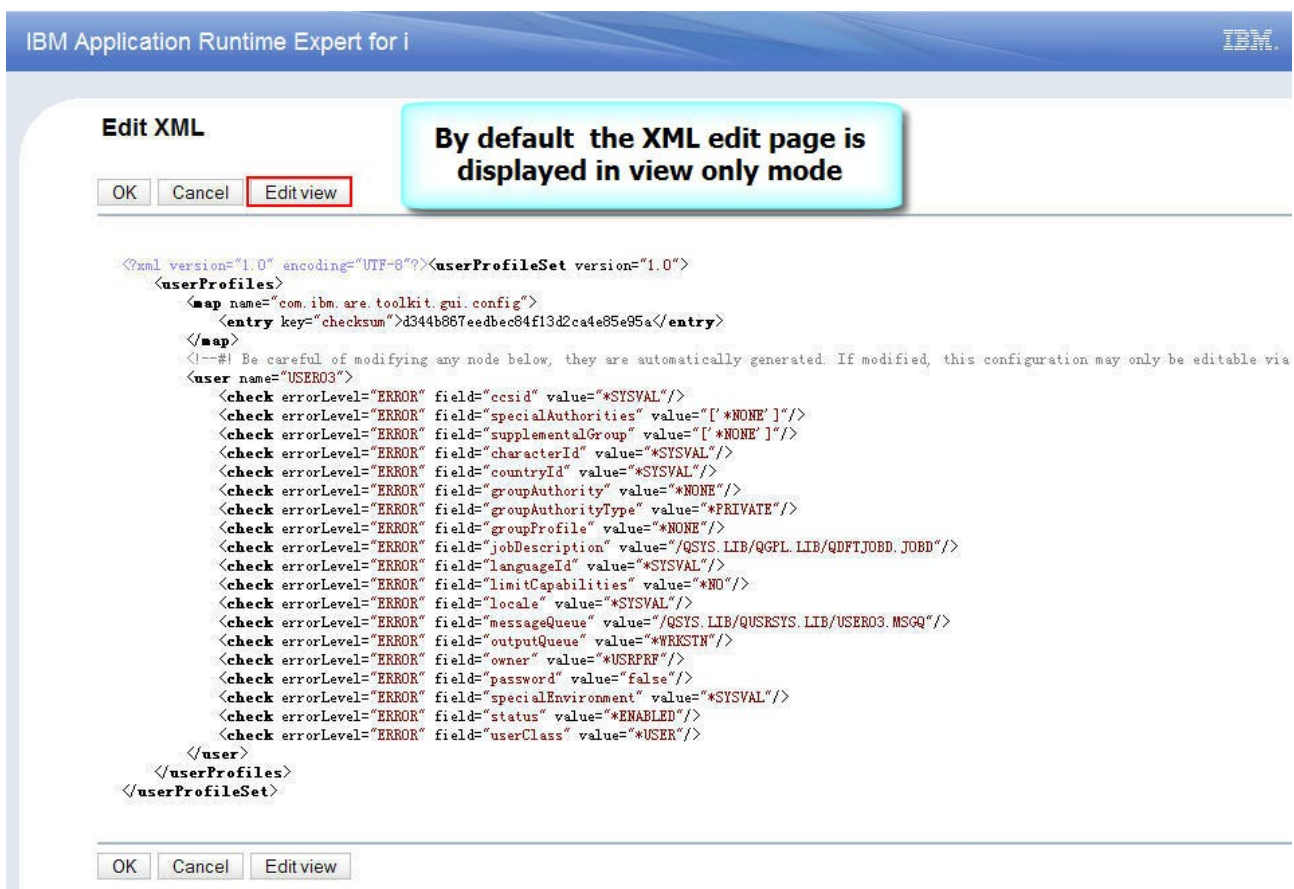


Figure 10: By default the XML edit page is displayed in view only mode.

By default, the Edit XML page displays in View Mode. It only allows user to view the XML file content. In Figure 10, you can see the XML content of "Collection2".

To edit the XML file of the selected collection, press "Edit view" button to switch to edit mode.

Figure 12 shows the Edit XML page in edit mode.

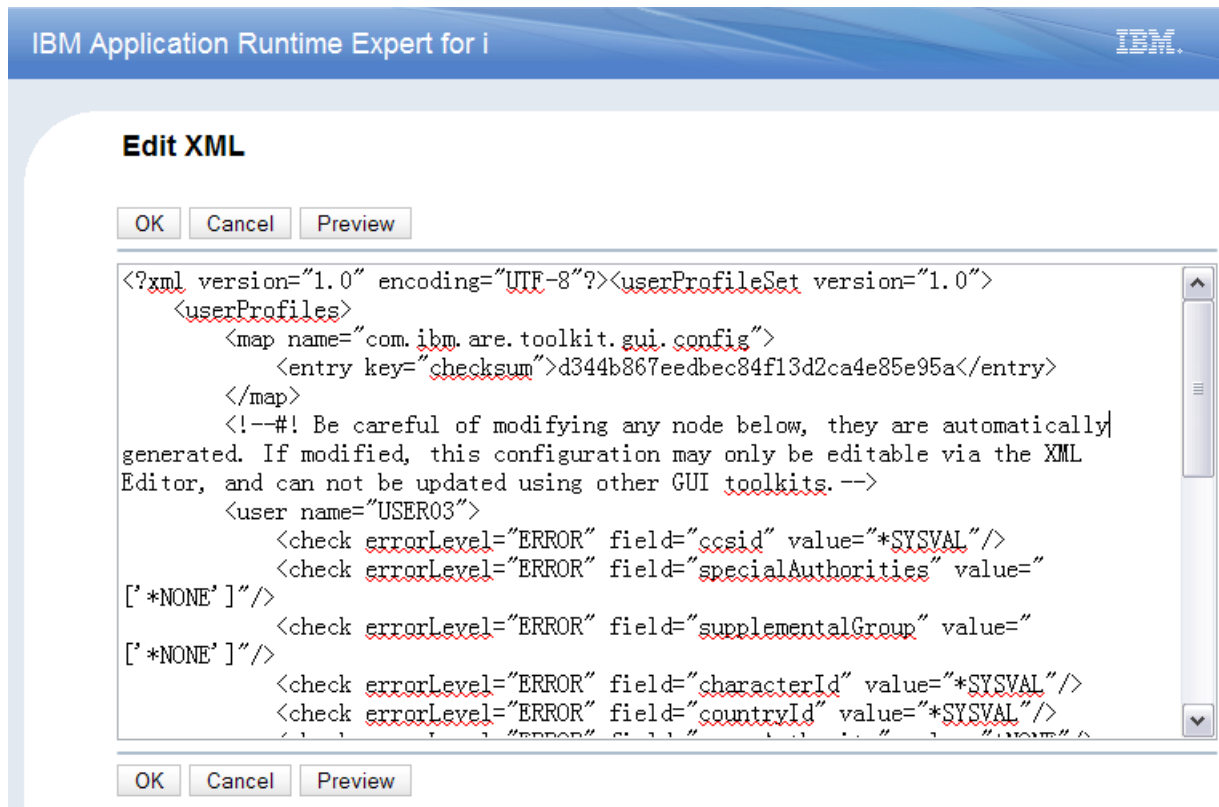


Figure 12: After pressing "Edit view" button, the Edit Mode of the XML editor is displayed

Under edit mode, you can see the following buttons:

**OK:** Save your changes and leave the Edit XML page. User will be taken to plugin customization page.

**Cancel:** Discard the changes and return to the previous XML content.

**Preview:** Switch to View Mode in which user can pre-review the XML file that was just modified.

After confirming your modification, you can click OK button to save the XML content of selected collection. Then you can get back to the plugin's page. Editing the collection is finished.

**Note:** In some cases, when you click the OK button, try to save the changes, the following message box pop-up displays (Figure 13):

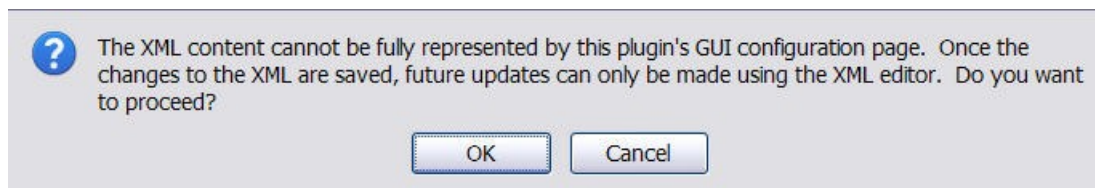


Figure13: GUI un-compatible XML data prompt

This indicates that your changes can be saved as a plugin's configuration, and using ARE you can check your system as normally expect. However, the XML file contains something that can NOT be fully represented by the ARE GUI widgets. If you click OK, you can only update the XML content of the selected

collection by using the XML editor. After pressing OK, GUI returns to the plugin customization page, a special icon appears beside the selected collection indicating XML only editing. For example, Figure 14, the special icon beside the "Collection3" indicates that you can only edit it by using the XML editor.

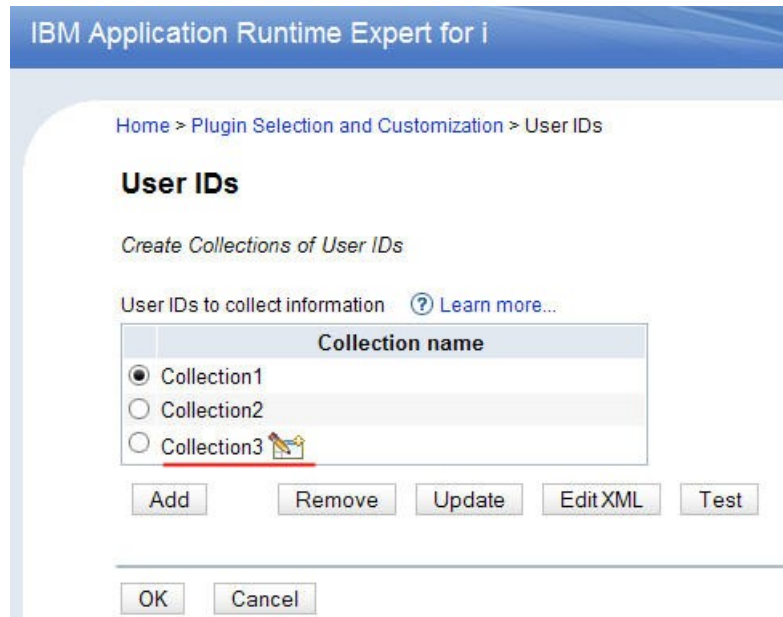


Figure 14: XML edit only indication

If you are interesting in the advanced usages of editing XML for plugin, please pay attention to the subsequent document "*Editing XML*" on our [official web site](#).

To leave the plugin customization page, just click OK button, you will be taken to the Plugin Selection and Customization page (Figure 8).

Now that you are done making edits to the template you are ready to rebuild the template. Click the Build Template button to begin the process. Once you have clicked the Build Template button, the build template summary page appears (Figure 15) and asks for your final confirmation. Build summary not only shows the general information of this template, but also lists each plugins' configurations as defined by the template (Figure 16).

IBM Application Runtime Expert for i

Home > Plugin Selection and Customization > Summary

## Summary

Deployment Template Build Summary

Template Summary | IBM i Products | User IDs

**Generated template file name:** /QIBM/UserData/ARE/workspace/templates/MyTemplate1/MyTemplate1.jar

**Version:** 1.0.6

**Description:** Template created by the IBM Application Runtime Expert for i.

**Runtime core version must be at or higher than:** 1.4.0

**Features enabled:**

- Capability to fix detected problems

**Build integrated template:**

- No - (The template requires ARE core PTF on the target system to run)

Confirm Cancel

Figure 15: Template Summary tab includes general info about this template

Template Summary tab shows a general summary of the template, including the following info:

1. The template file path on this system
2. Current version of the template
3. General description
4. ARE runtime core version requirement
5. Features enablement info
6. Indicate whether this template is an integrated template or not. An integrated template contains ARE core binary, and does not require ARE core PTF on the target system to run. Building integrated template is covered later in this document.

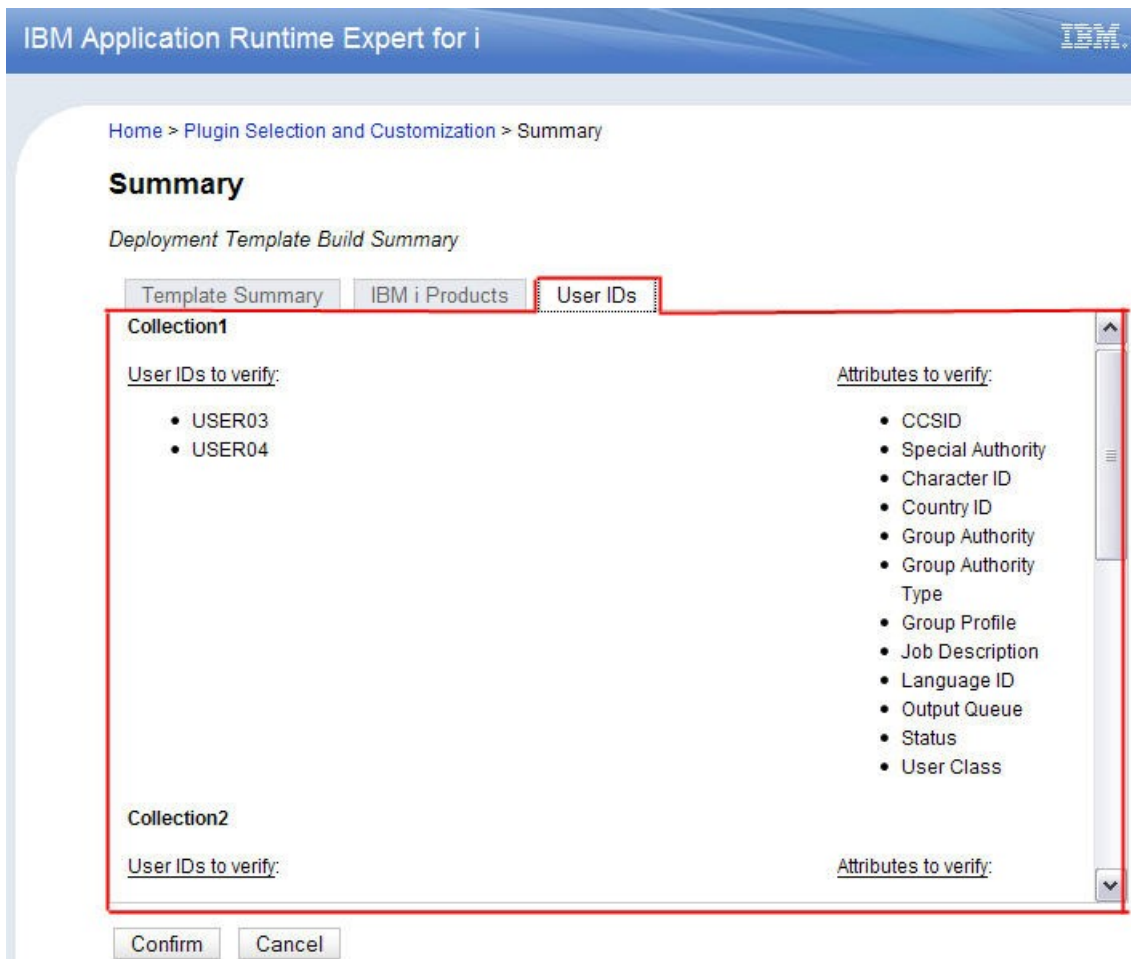


Figure 16: Summary tab of User IDs plugin

Figure 16 is an example for summary tab of User IDs plugin. It lists the attributes and expected values of each collection for the plugin. You can review plugins' configuration. This is the final confirmation, click the confirm button to perform the re-build template operation.

## 2. Re-building your template: Template Build Option usage

After editing your template, you need to re-build it. Deployment template editor provides you two template build options:

- Build template that has been modified option (Default)
- Select and rebuild plugins based on the contents of this system

These two options provide you with 2 very different ways to rebuild this template. These options are available in the deployment template editor only while you are editing an existing template.

The Template Build Option button is on the bottom of the Plugin Selection and Customization page (Figure 17):

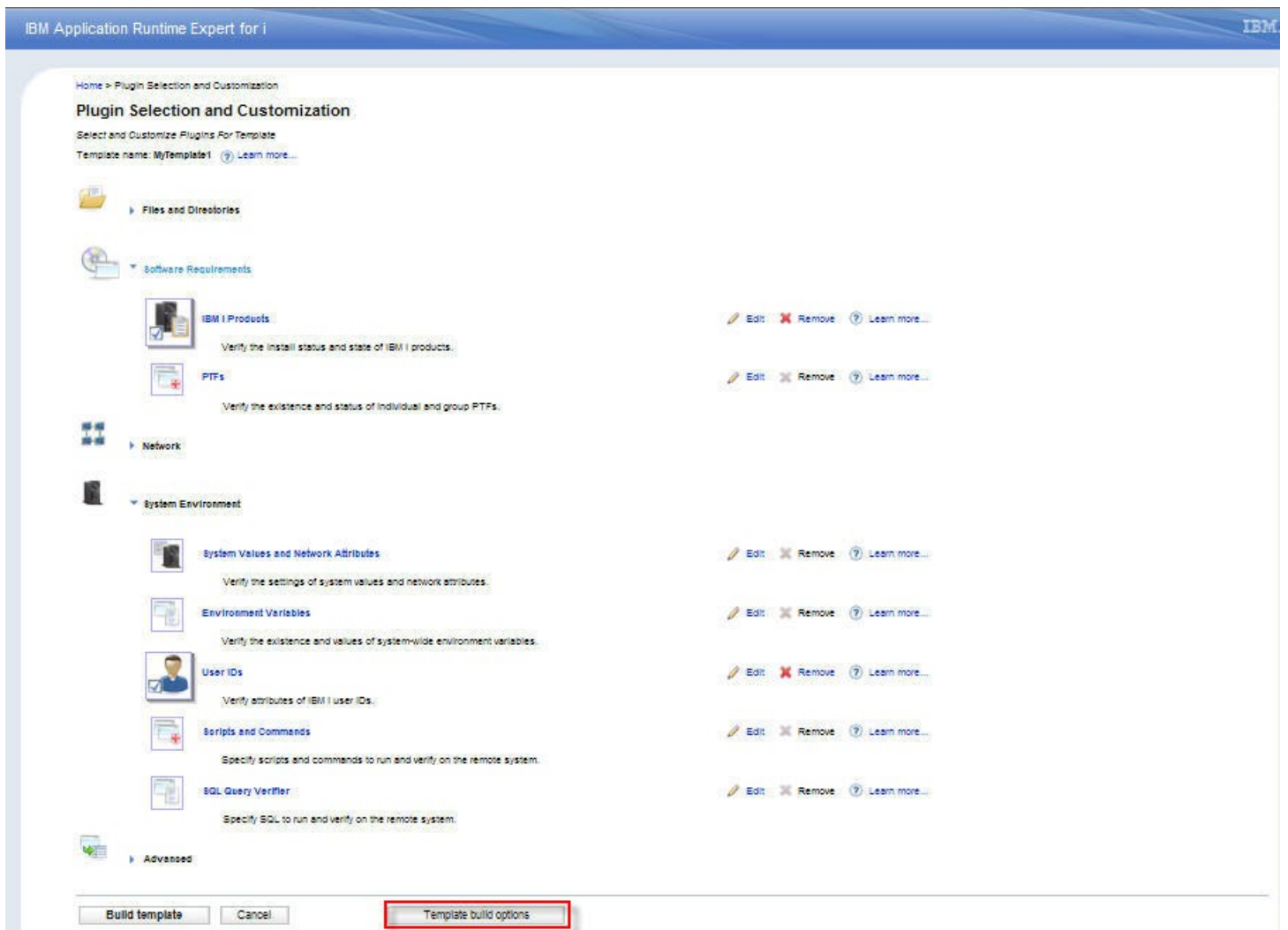


Figure 17: Template build options button.

After clicking the "Template build options" button, template built options page is displayed (Figure 18).

IBM Application Runtime Expert for i

Home > Plugin Selection and Customization > Template Build Options

## Template Build Options

*Edit the Template Configuration*

**Template details** [? Learn more...](#)

Name: MyTemplate1

Description:

Version:   Auto increment

**Build options** [? Learn more...](#)

Built using deployment template editor version: 1.8.0

Application Runtime Expert core considerations

- Build template without runtime core. Runtime will be on remote system by default.  
Runtime core version must be at or higher than:
- Build template including the runtime core. The remote runtime will not be used.  
*Application Runtime Expert core version to integrate: 1.6.7*

Template build options

- Build template that has been modified. This is the default option for template build.
- Select and rebuild plugins based on the contents of this system.

Figure 18: The page of template build options

## 2. 1. (Default) Build template that has been modified

The "Build template that has been modified" option is as its title suggests. It just re-builds the plugin configurations that you have edited. This is the default option you can use to re-build a template. An equivalent operation is directly clicking the "Build Template" button on Plugin Selection and Customization page, when you intend to re-build a template. If you have tried to create your template, you definitely have used "Build Template" button to build a template.

To leave the build option page, click on OK button (Figure 18). Then you will be taken to Plugin Selection and Customization page. Click Build template to rebuild only the plugins that you edited.

## 2. 2. Select and rebuild plugins based on the contents of this system

The other option "Select and rebuild plugins based on the contents of this system" is used to easily rebuild template based on the information of this current system. It's useful to re-collect updated attributes of application or the system after maintenance or system tuning. This option updated every plugin with refreshed details for all attributes for each plugin based on the information found from this system. If you did not edit a plugin, it will still be rebuilt with new contents.

By default, if a collection is not modified by the GUI, it will not be updated during the build process. Even if things on the current system are changed, the collection will not be changed. With the rebuild template function provided by this page, you can select collections that need to rebuild based on the information on the current system.

You can always mark a collection as rebuild by editing that collection in the related GUI. This Rebuild Template option here only provides an easy way to quickly rebuild a template.

Through the following steps you can enable the template re-build page:

1. Select option "Select and rebuild plugins based on the contents of this system" in Template Build Options page. Click the OK button. You will be taken to the Plugin Selection and Customization page.
2. Click Build Template button on the Plugin Selection and Customization page. Then you will be taken to the Re-build Template page (Figure19).

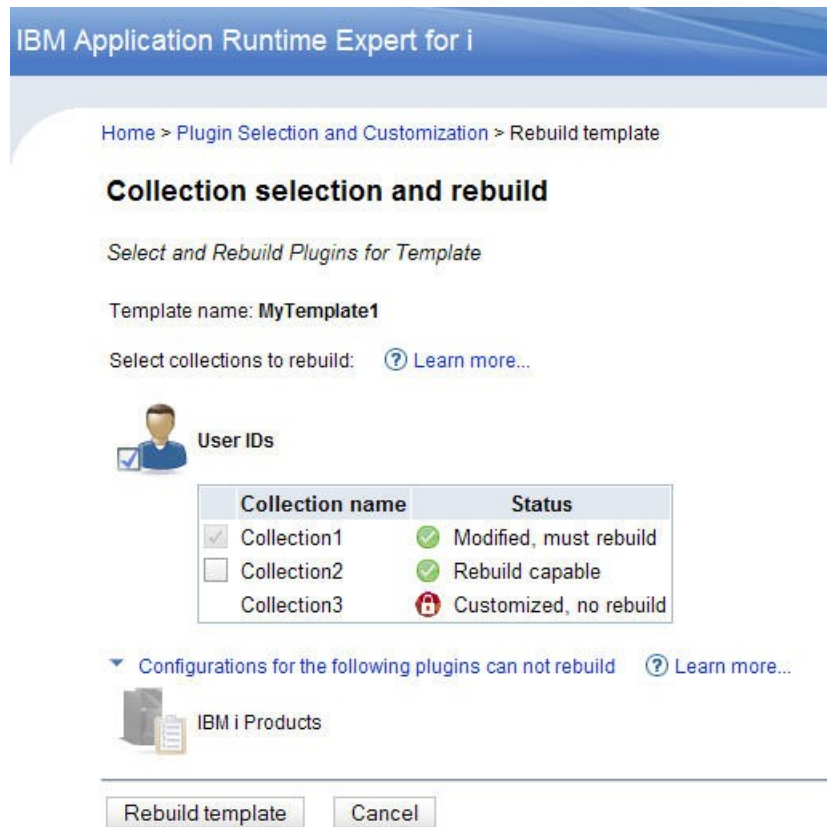


Figure19: Re-build template page for "MyTemplate1" template

In general, the re-build template page consists of two parts:

1. Select collections to re-build: each plugin that is capable for rebuilt is shown in this section. You can see a table of collections for each plugin. For example, the table of collections for the User IDs plugin is shown in Figure 19. This table shows all the collection names for this plugin, and their status. There are three types of collection status:

**Modified, must rebuild:** means the collection has been modified during this editing process. It must be re-built.

**Rebuild capable:** means this collection is capable for rebuild. You can check the check-box beside each collection name, in order to rebuild it.

**Customized, no rebuild:** means the content of this collection has been customized, and is not capable



for rebuild. For example, Collection3 in User IDs plugin's collection table. For cases like this, there are customized options in the XML. If we were to rebuild this collection, all the customizations would be lost.

2. Configurations for the following plugins can not rebuild: this section is only available while the current template contains plugin(s) that cannot be rebuilt.

To rebuild this template, click on "Rebuild template" button. Then, you will be taken to template build summary page. The subsequent things are the same as the normal build template process.

<End of document>