



Customizing Broadband Access Center

The Cisco Broadband Access Center software enables you to customize its user interface to meet the unique requirements of your network. Among the components installed with the BAC server is the Cisco IP Solutions Center (ISC) Template Manager.

[Table 10-1](#) lists the topics discussed in this chapter and their associated sections.

Table 10-1 *Customizing Broadband Access Center Topics*

If you want to...	Go to the...
Learn about Template Manager	“Overview of Template Manager” section on page 10-2.
Create a template or view a sample template	“Creating a Template” section on page 10-2.
Set default values for variables in a template	“Creating Data Files” section on page 10-5.

Overview of Template Manager

A BAC template contains the Cisco IOS software commands, attributes, and variables that define a service feature. A template defines variables and merges variables with data to generate commands that you download to a router. You can use BAC's default configuration templates, or you can define your own templates, using ISC Template Manager.

With the ISC Template Manager to select and modify existing BAC templates and data files, as well as to create new ones. BAC implements the Template and Data File Chooser component of Template Manager. To work with Template Manager, you should be familiar with the Velocity Template Language (VTL), a scripting tool that enables you to embed dynamic content in the BAC web client. Information about VTL and its syntax is readily available through the World Wide Web. You should also be familiar with extended markup language (XML).

The ISC Template Manager interface is similar to the BAC interface. In the Object Selector area, it presents a tree view of template folders and templates. The right mouse button is active in this area of the main window, enabling you to:

- Create new folders and templates
- Copy and paste templates
- Rename templates
- Delete templates

You highlight a folder to add a template to it. When you highlight a template, the system displays a link to the template in the content area of the main window. Click this link to view an existing template.

**Note**

To take full advantage of the customization provided by Template Manager, you need also to work with the Cisco Convergent Network Solution Center–Service Provisioning (CCNSC-SP) application's Profile Manager. The CCNSC-SP graphical user interface is installed with BAC. For more information on Profile Manager, see the *CCNSC-SP User Guide for Release 2.0* at the following URL:

http://www.cisco.com/univercd/cc/td/doc/product/rtrmgmt/ccnsc_sp/2_0/

Creating a Template

When you create a template, you work with two editors:

- The Template Editor, in which you specify the processing logic that you want BAC to use
- The Variable Editor, in which you specify default values for variables

About Templates and Variables

When you create a template, you work with the Template Editor to specify the information described in [Table 10-2](#).

Table 10-2 *Template Fields*

Field	Description
Name	The name that you want to assign the template. This name should be descriptive of the template contents.
Description	An optional text block that enables you to provide more descriptive information about the template.
Body	The area you use to enter a VTL script to define the contents of the template.

As you work with a template, you can set default values for its variables. The information you set for variables depends on its data type. The information for most variables is described in [Table 10-3](#).

Table 10-3 *Variable Fields*

Field	Description
Type	The data type of the variable. Supported types are String, Integer, Float, IPv4 Address, Subtemplate, Dynamic Java Class, Dynamic URL.
Description	Descriptive information about the variable.
Dimension	Specifies whether the value assigned to the variable is a singleton, a list of values, or a matrix of values.
Required	A flag that defines whether a variable a user must enter a value when creating a data file for the template.
Default	The default value that is displayed when creating a data file for the template.
Minimum Length	The minimum length for the variable.
Maximum Length	The maximum length for the variable.
Available Values	A list of values for the variable from which a user must select when creating a data file for the template.

The sections that follow describe the procedure for creating a template and then show a sample main section and a sample user section.

To Create a Template

To create a template, follow these steps:

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- Step 1** Log in to BAC.
 - Step 2** Click the **Tools** tab. The system displays the Tools page in the content area of the main window.
 - Step 3** In the Subtask bar, click **Template Manager**. The system displays the Template Manager page in the main window.
 - Step 4** In the Object Selector, click **Broadband**.
 - Step 5** In the main window, click **Create Template**. The system displays the Template Editor page.

- Step 6** Enter information about the main template section, as defined in [Table 10-2](#).
- Step 7** To validate the script that you entered, from the Select & Click Go drop-down list, click **Validate** and **Go**. Template Manager checks the script syntax and displays a dialog box that describes syntax errors or informs you the script is valid.
- Step 8** Click **OK**. The system redisplay the Template Editor page.
- Step 9** To set default values for the variables that Template Manager generates from your script, from the Select & Click Go drop-down list, click **Variables**. The system displays the Templates Variables dialog box. To set the value or values for a variable:
- Select the variable.
 - Click **Edit**. The system displays the Variable Editor dialog box. Set values for the variables as defined in [Table 10-3](#).
 - Click **OK**. The system redisplay Templates Variables dialog box.
 - Click **OK**. The system redisplay the Template Editor.
- Step 10** From the Select & Click Go, drop-down list, click **User Section**. The system displays the Section Editor dialog box superimposed over the Template Editor.
- Step 11** Enter information in the Section Editor to control the way BAC displays the contents of the template. In the Section Editor, you:
- Add the variables you declared in the main section.
 - Define the way you want each variable to appear; for example, as a drop-down list, a check box, or a text field.
- For more information, see the [“Sample User Section” section on page 10-5](#).
- Step 12** Click **OK**. The system redisplay the Template Editor.
- Step 13** Click **Save**.
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Sample Main Template

The following code segment illustrates the main template section:

```
#set ($radius = "RADIUS")
#set ($tt = "true")
no logging consoleip cefaaa new-model
#if ($System_COND_RADIUS == $radius)
aaa authentication ppp default radius local
#else aaa authentication ppp default local
#end
aaa authorization network default group radiusvirtual-profile aaa
#if ($System_COND_CNOTE == $tt)
Logging on
Logging $System_CNOTE_ip_address
#end
```

Sample User Section

The following XML code illustrates the user section of a template:

```
<UserSection><![CDATA[
  <GuiDescription>
    ...
    <CheckBox>
      <name>System_COND_CNOTE</name>
      <displayName>CNOTE</displayName>
      <required>>false</required>
      <disabled>>false</disabled>
      <invisible>>false</invisible>

      <value>>true</value>
      <enableVarList CType="TextList">
        <String >System_CNOTE_ip_address</String>
      </enableVarList>
    </CheckBox>
    <TextField>
      <name>User_name</name>
      <displayName>User Name</displayName>
      <required>>false</required>
      <disabled>>false</disabled>
      <invisible>>false</invisible>
      <readOnly>>false</readOnly>
    </TextField>

  </GuiDescription>
]]></UserSection>
```

Creating Data Files

You can use Template Manager to create default Cisco IOS configlets for subsequent downloading to network devices. You do this by associating one or more data files with a selected template.

About Data Files

When you work with a data file, you affect values that the BAC interface displays. The Data File Editor page has two sections, which are defined in [Table 10-4](#).

Table 10-4 Data File Editor Sections

Section	Definition
General	Information about the data file, including the data file name and a description.
Variables	System variables for the specified template.

To Create a Data File

- Step 1** Click the **Tools** tab. The system displays the Tools page in the content area of the main window.
 - Step 2** In the Subtask bar, click **Template Manager**. The system displays the Template Manager page in the main window.
 - Step 3** In the Object Selector, expand the Broadband hierarchy and select the template with which you want to work.
 - Step 4** In the main window, click **Create Data File**. The system displays the Data File Editor page in the main window.
 - Step 5** In the General section of the Data File Editor, enter a data file name, and, optionally, a description.
 - Step 6** In the Variables section, set default values for the fields in the specified template.
 - Step 7** To view your work, click **Configlet**. The system displays the segment of the Cisco IOS configlet that you have just created.
 - Step 8** To save your work, click **Save**.
 - Step 9** Click **Close**.
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