

# PVCS Version Manager SourceBridge User's Guide

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# Chapter 1

# **Installing and Configuring SourceBridge**

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### **Introduction**

SourceBridge is an extension that allows you to associate source control actions with SBM items and record version control history in SBM. SourceBridge intercepts check-out, check-in, undo check out, and add file processes to allow you to associate source files with SBM items. The source control processes are captured and recorded in the SBM database as well as in the source control environment.

SourceBridge can be used with integrated development environments that comply with Microsoft Source Code Control Interface (MSSCCI) standards, such as PVCS Version Manager. You can also use SourceBridge from within supported versions of PVCS Version Manager.

## **Installing SourceBridge**

SourceBridge is installed on each user's machine. Before installation, the integrated development and source control environments must be installed and configured.

- To use SourceBridge, you must be granted the "Logon from SourceBridge" privilege. The "Logon from SourceBridge" privilege also enables you to create, run, modify, and delete Version Control Actions reports in the SBM User Workspace. Contact your SBM administrator to determine if you have been granted this privilege.
- Select the Version Control History check box on the Display tab of your user profile in SBM. This setting allows you to view version control history in the SBM User Workspace.
- SBM must be configured to allow legacy access for Remote Administration and API when using an Authentication mechanism that has this as an option (SBM Session Cookies). In SBM Configurator, on the General tab, select Allow legacy access for Remote Administration and API.

## **Source Control Registry Settings**

The SourceBridge installation modifies the system registry to allow SourceBridge to insert itself between the integrated development environment and source control.

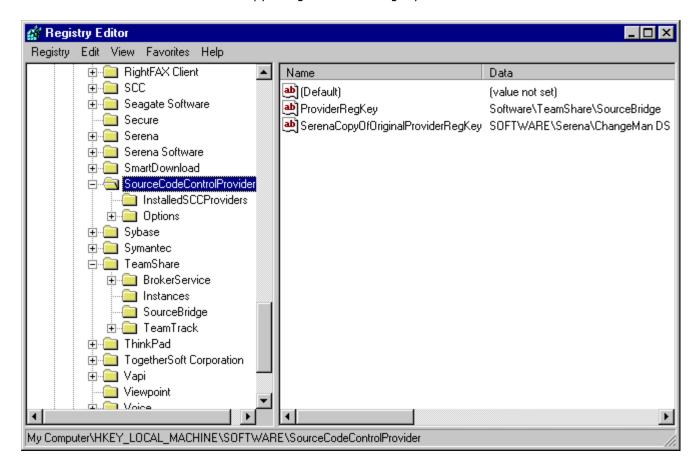
## **Understanding the Registry Settings**

The following figures show how the SourceCodeControlProvider key is displayed before and after SourceBridge has been installed.

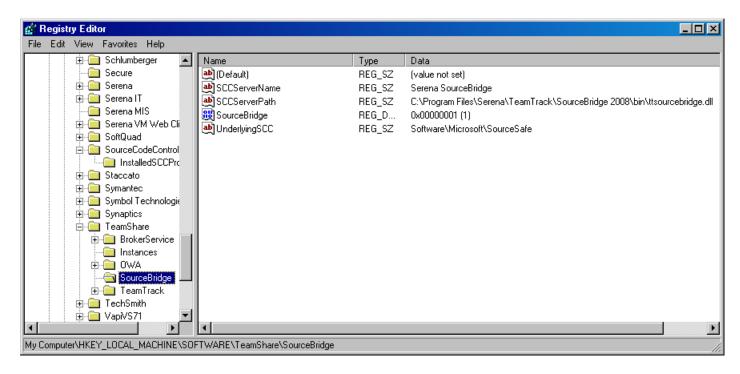
The following figure shows the Windows registry editor before the SourceBridge installation. The ProviderRegKey points to the source control provider.



The following figure shows is the Windows registry editor after the SourceBridge installation. The ProviderRegKey points to SBM. The prior setting of ProviderRegKey is saved in SerenaCopyofOriginalProviderRegKey.



The SourceBridge installation also adds registry keys to the Local Machine\Software\TeamShare\SourceBridge folder, as shown in the following figure. The UnderlyingSCC key points to the source control provider that is intercepted by SourceBridge.



## **Troubleshooting the Installation**

When SourceBridge is installed, the ProviderRegKey points to the Local Machine\Software\TeamShare\SourceBridge folder. If SourceBridge is reinstalled without first uninstalling, the ProviderRegKey value is copied without first checking to see if SourceBridge is already installed and your development environment may be unable to locate your source control provider. Repeated reinstallations may crash the development environment. To fix this problem, uninstall SourceBridge through the Add/Remove Programs Properties dialog box located in the Windows Control Panel, then reinstall.

In addition, if you upgrade or re-install your source control tool, you must update the ProviderRegKey to point to the Local Machine\Software\TeamShare\SourceBridge folder.

## **Configuring SourceBridge**

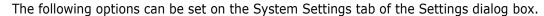
Before using SourceBridge, you must provide the SBM Web server location, your SBM login ID and password, and your source control provider. These settings are made on the System Settings tab of the Settings dialog box, which automatically opens when you try to check a file in or out for the first time after installing SourceBridge.

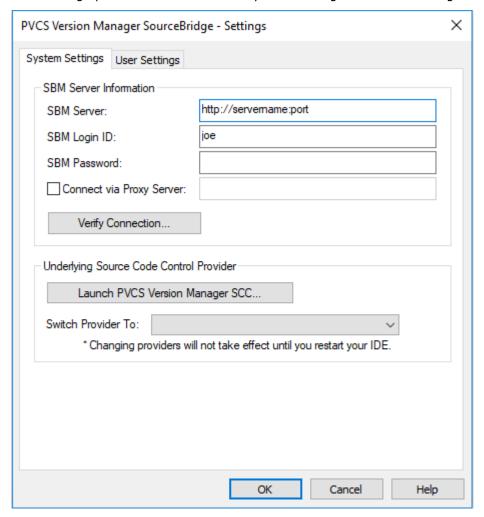
You can also open the Settings dialog box manually using the following methods:

- Click the Source Control icon located on your IDE toolbar.
- Depending on your IDE, select Source Control from the Project menu in the IDE. For example, in Microsoft Visual C++, select Source Control from the Project menu, and then select your source control provider, such as PVCS Version Manager.
- In PVCS Version Manager, select SourceBridge from the Tools menu.

When the SourceBridge dialog box opens, click the Settings button to open the Settings dialog box to the System Settings tab.

## **Configuring System Settings**





SBM Server

Type the name, IP address, or URL of the SBM Web server. For a secure connection, type the URL of the SBM Web server, including the https://secure protocol.

■ SBM Login ID

Type your SBM login ID.

SBM Password

Type your SBM password.

Connect via Proxy Server

Select this check box to connect to the Web server through a proxy server. You may also enter a URL here.

Verify Connection

Click this button to verify that SourceBridge can connect to the SBM Web server. If SourceBridge is unable to connect to the SBM server, modify information in the SBM

Server, Login ID, and Password boxes as needed or verify with your SBM administrator that the Web server is running.

**Note**: If you are using SourceBridge within the PVCS Version Manager Windows client, the following options are not available.

Launch Source Control Provider

Click this button to launch the source control provider configured to work with SourceBridge.

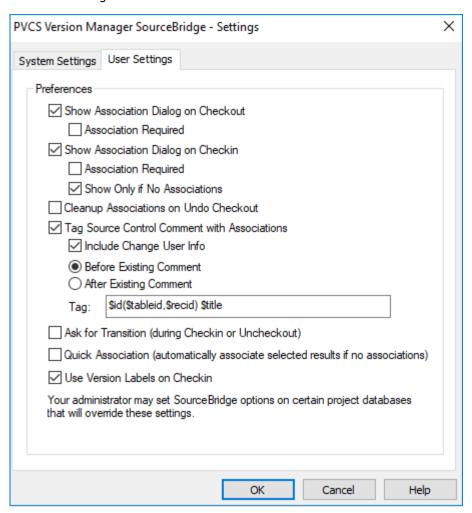
Switch Provider to

Select the source control provider you want to use from the drop-down list. This list is populated with all source control applications that comply with MSSCCI standards that are installed on the your machine. You must restart your development environment after selecting a new source control provider.

## **Configuring User Settings**

The following options are available on the User Settings tab of the Settings dialog box.

**Note**: Your administrator can override certain settings. Settings that have been overridden by your administrator are disabled and marked with an asterisk. Settings that cannot be changed are disabled.



#### Show Association Dialog on Checkout

Select this check box to open the SourceBridge - Check Out dialog box each time source files are checked out. This enables you to associate SBM items with the files being checked out. The Show Association Dialog on Checkout check box is selected by default. Note that this setting has no effect when SourceBridge is used through the PVCS Version Manager Windows client.

#### Association Required

This check box is enabled if the Show Association Dialog on Checkout check box is selected. Select the Association Required check box to require that at least one SBM item is associated with the file or files being checked out. By default, this check box is cleared.

#### Show Association Dialog on Checkin

Select this check box to open the SourceBridge - Check In dialog box each time source files are checked in. This enables you to associate new SBM items with the files or to modify associations made at check in. This option also opens the SourceBridge - Add to Source Control dialog box each time you add files to source control. By default, the Show Association Dialog on Checkin check box is selected. Note that this setting has no effect when SourceBridge is used through the PVCS Version Manager Windows client.

#### · Association Required

This check box is enabled if the Show Association Dialog on Checkin check box is selected. Select the Association Required check box to require that at least one SBM item is associated with the file or files being checked in or added to source control. By default, this check box is cleared.

#### Show Only if No Associations

This check box is enabled if the Show Association Dialog on Checkin check box is selected. Select the Show Only if No Associations check box to open the SourceBridge Check In dialog box if file or files being checked in are not already associated with an SBM item. By default, this check box is selected.

#### Cleanup Associations on Undo Checkout

Select this check box to automatically remove check out records from SBM items when an undo-checkout operation is performed. Clear this check box to log undo checkout records and to store check out records in SBM when an undo checkout operation is performed. By default, the Cleanup Associations on Undo Checkout check box is cleared.

#### Tag Source Control Comment With Associations

Select this check box to record SBM item associations in the comments area for each file's source control properties for some source control environments.

#### • Include Change User Info

Select this check box to include your SBM user name and login ID in the comments area for each file you associate with items as you perform check out and check in operations. By default, this check box is selected.

#### · Before Existing Comment

Select this option to add SBM association information to the beginning of existing comments.

#### • After Existing Comment

Select this option to add SBM association information after existing comments. This option is selected by default.

#### Tag

Specify a format for association information added to comments. The tags can be made up of text and the following data identifier tags:

\$id

Returns the Item ID for the SBM item.

Sownid

Returns the login ID of the user who owns the SBM item at the time of the association.

• \$project

Returns the name of the project in which SBM items reside at the time of the association.

\$recid

Returns the SBM item's database record ID.

• \$tableid

Returns the SBM item's database table ID. The default tag is \$id(\$tableid,\$recid) \$title.

Ask for Transition (During Checkin or Uncheckout)

Select this check box for SBM to prompt you to transition items on completion of associated check in and undo check out operations. By default, this check box is cleared.

Quick Association

Select this check box to associate SBM items selected in the Results list on the SourceBridge Check In or SourceBridge Check Out dialog boxes with the files being checked in or out. The enables you to quickly associate items without clicking the Associate button in the Associations area. By default, this check box is cleared.

Use Version Labels on Checkin

This setting is available when PVCS Version Manager is used as the underlying source control system. Select this check box to add a version label to the file that contains the SBM Item ID when you check in files.

# Chapter 2

# **Using SourceBridge**

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### **Introduction**

SourceBridge enables you to associate source control actions with SBM items from within the development environment and record these actions in SBM and the source control environment. You can also search for SBM items and launch SBM.

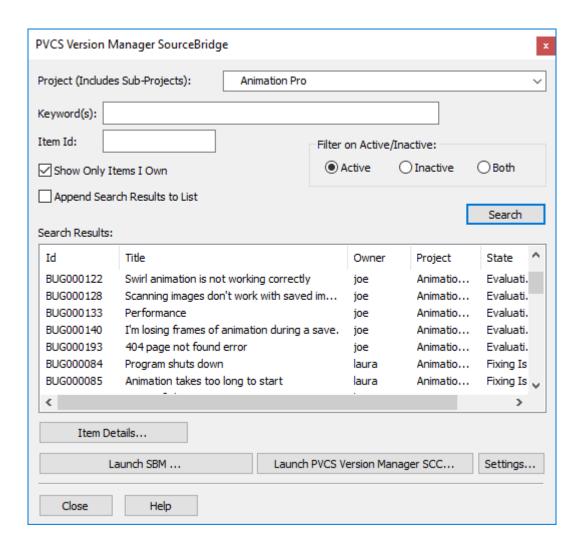
## Using SBM in SourceBridge

The SourceBridge dialog box enables you to work with SBM items from within the integrated development environment or from within PVCS Version Manager. Specifically, you can use the SourceBridge dialog box to:

 Search for items you have privileges to transition and launch SBM to open to those items.

**Note**: SBM items are associated with source control files using the SourceBridge - Check In, SourceBridge - Check Out, and SourceBridge - Add to Source Control dialog boxes. For details see page 17.

- Launch the SBM User Workspace.
- Launch your source control application, if applicable.
- Access SourceBridge system and user settings.



You can open the SourceBridge dialog box using the following methods:

- Click the Source Control icon located on your IDE toolbar.
- Depending on your IDE, select Source Control from the Project menu in the IDE. For example, in Microsoft Visual C++, select Source Control from the Project menu, and then select your source control provider, such as PVCS Version Manager.
- In PVCS Version Manager, select SourceBridge from the Tools menu.

The following options are available on the SourceBridge dialog box:

#### Project (Includes Sub-projects)

This option enables you to filter searches by projects in which you have privileges to transition items. If a parent project is selected from the drop-down list, items are returned from the parent project and any of its sub-projects.

#### Keyword(s)

Use the Keyword box to search for information in Text fields that are set up for keyword searching by your administrator. Keyword searches typically apply to the Title and Description fields, but may include other fields as well. Type the keyword you want to use for the search in the Keyword box. Separate multiple keywords with a space. To find an exact phrase, enclose the phrase with quotation marks. Asterisks (\*) serve as wildcard characters.

#### ■ Item ID

To find items by ID, type the Item ID in the box. The following criteria applies to Item ID searches:

- Prefixes specified with the ID number are ignored.
- Leading zeros on the ID number may be left off your search criteria. For example, to find item ID number "BUG00017," type "17."
- Wildcard characters are automatically prepended and appended to your search criteria.
- If you provide search criteria in the Keyword(s) and Item ID boxes, the Keyword criteria is ignored, and the search is based on the Item ID criteria.
- If multiple items with the same ID number are found in a project and its descendant, each of these items is added to the Search Results list.
- If a single digit is typed in the Item ID box, each item in the database with an Item ID that includes that digit is returned. For example, if 5 is typed, items with ID numbers 5, 52, 75, and so on are returned.

#### ■ Filter on Active/Inactive

This option enables you to list active items you can transition, inactive items you can transition, or both.

#### Show Only Items I Own

Select this check box to list all items you own in the specified project and its sub-projects. Clear this check box to list all items you can transition in the specified project and sub-projects. If the Show Only Items I Own check box is cleared, you must specify a keyword or item id as search criteria.

#### Append Search Results to List

Select this check box to add search results to the existing Search Results list. Clear this check box to replace the Search Results list with search results.

#### Search

Click Search to search for SBM items based on specified criteria.

#### Search Results

Items meeting the search criteria are listed in the Search Results list. The list displays the Item ID, Title, Owner, Project, State, and Active/ Inactive status for each item.

Item Details

Select an item from the Results list, and then click Item Details to open the SBM User Workspace to that item.

Launch SBM

Click this button to launch SBM. You can then work with reports, submit items, etc.

Launch Source Control Provider

Click this button to launch the source control provider configured to work with SourceBridge.

Settings

Click this button to open the Settings dialog box and set system and user settings.

## **Associating Items With Source Control Actions**

SourceBridge leverages the development environment's integration with version control software; therefore, unless you are using Version Manager, all files must be checked in and checked out from within the IDE to be recorded in SBM. If you are using Version Manager and SourceBridge is properly installed and configured, file operations performed from the source control environment are recorded in SBM.

The process for checking files in and out depends on your source control application and integrated development environment.

### **Associating SBM Items With Check-Out Actions**

Depending on your user settings, the SourceBridge - Check Out dialog box opens when you check out files from the IDE or PVCS Version Manager. If you are using PVCS Version Manager, you can also click the Associate Issues button on the Check Out File dialog box to open the SourceBridge - Check Out dialog box.

The SourceBridge Check Out dialog box is used to associate SBM items listed in the Results list with source files being checked out. The check-out actions are then recorded in the SBM database and can be viewed in the Version Control History section of associated items in SBM if you have selected the Version Control History display option in your user profile. Depending on your user settings, these actions are also recorded in the source control environment. For details see "Configuring User Settings" on page 10 and "SBM Data in the Source Control Tool" on page 24.

**TIP** Click the Launch SBM button to open the SBM User Workspace.

To associate SBM items with files on check out:

- 1 Using the search mechanisms described in Search Options, locate SBM items to associate with files being checked out.
- **2** Associate SBM items with the files being checked out, as described in Association Options.
- **3** Click Complete to finish your action or Cancel to abort your action.

## **Associating SBM Items With Check In Actions**

Depending on your user settings, the SourceBridge - Check In dialog box opens when you check files in from the IDE or from PVCS Version Manager. For details see "Configuring User Settings" on page 10.

If you are using PVCS Version Manager, you can also click the Associate Issues button on the Check In File dialog box to open the SourceBridge - Check In dialog box.

**TIP** Tip: Click the Launch SBM button to open the SBM User Workspace.

- 1 Using the search mechanisms described in "Search Options" on page 20, locate SBM items to associate with files being checked in.
- **2** Associate SBM items with the files being checked in, as described in "Association Options" on page 21.
- **3** Click Complete to finish your action or Cancel to abort your action.

### Transitioning Items On Check In or Undo Checkout

You can transition items upon completion of associated check in and undo check out operations.

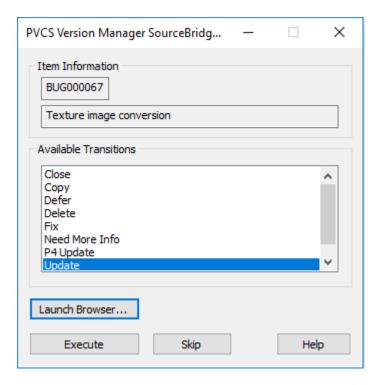
If you are associating multiple SBM items with the version control operation, SourceBridge prompts you to transition each item individually. This enables you to select different transitions for individual items as needed. If required fields need data, SourceBridge prompts you to finish the transition in SBM. SourceBridge also prompts you to finish the transition in SBM if you selected a special transition type, such as Copy, Post Item, or Publish Problem.

If multiple files are associated with an SBM item, you are prompted to transition the item when you check in the last file or you "undo" the check out on the last file.

To use the transition feature, you must select the Ask for Transition check box on the User Settings tab of the Settings dialog box. For details see "Configuring User Settings" on page 10.

To transition items using SourceBridge:

1 After the file check in or undo check out operation completes, the SourceBridge Transition Item dialog box opens. The Item ID and Title of the first item selected are shown in the Item Information area.



- **2** Select the appropriate transition from the Available Transitions list, and then click one of the following options:
  - Launch SBM

Click this button to launch the SBM User Workspace to the Transition form for this item. You can then update items as needed and transition them manually.

Execute

Click this button to transition the selected item. Click Yes to launch SBM and finish the transition. Click No to cancel the transition.

**Note**: The version control operation is completed before the transition prompt is given, so cancelling the transition does not cancel the version control operation.

Skip

Click this button to record the version control operation in SBM without transitioning the item.

# Associating SBM Items With Add to Source Control Actions

Depending on your user settings, the SourceBridge - Add to Source Control dialog box opens when you add files to source control, enabling you to associate SBM items with these items. For details see "Configuring User Settings" on page 10.

**TIP** Click the Launch SBM button to open the SBM User Workspace.

To associate SBM items with files being added to source control:

- 1 Using the search mechanisms described in "Search Options" on page 20, locate items to associate with files being added.
- **2** Associate SBM items with the files being added, as described "Association Options" on page 21.
- **3** Click Complete to finish your action or Cancel to abort your action.

## **Search Options**

Search options are used in the SourceBridge Check Out, SourceBridge Check In, and SourceBridge - Add to Source Control dialog boxes. The following search options are available:

Project (Includes Sub-projects)

This option enables you to filter listed items by projects in which you have privileges to transition items. If a parent project is selected from the drop-down list, items are returned from the parent project and any of its sub-projects.

Keyword(s)

Use the Keyword box to search for information in Text fields that are set up for keyword searching by your administrator. Keyword searches typically apply to the Title and Description fields, but may include other fields as well. Type the keyword you want to use for the search in the Keyword box. Separate multiple keywords with a space. To find an exact phrase, enclose the phrase with quotation marks. Asterisks (\*) serve as wildcard characters.

Item ID

To find items by ID, type the Item ID in the box. The following criteria applies to Item ID searches:

- Prefixes specified with the ID number are ignored.
- Leading zeros on the ID number may be left off your search criteria. For example, to find item ID number "BUG00017," type "17."
- Wildcard characters are automatically prepended and appended to your search criteria.
- If you provide search criteria in the Keyword(s) and Item ID boxes, the Keyword criteria is ignored, and the search is based on the Item ID criteria.
- If multiple items with the same ID number are found in a project and its descendants, each of these items is added to the SourceBridge Check Out list.

• If a single digit is typed in the Item ID box, each item in the database with an Item ID that includes that digit is returned. For example, if 5 is typed, items with ID numbers 5, 52, 75, and so on are returned.

#### ■ Filter on Active/Inactive

This option enables you to list active items you can transition, inactive items you can transition, or both.

Show Only Items I Own

Select this check box to list all items you own in the specified project and its sub-projects. Clear this check box to list all items you can transition in the specified project and sub-projects. If the Show Only Items I Own check box is cleared, you must specify a keyword or item id as search criteria.

Append Search Results to List

Select this check box to add search results to the existing Results list. Clear this check box to replace the Results list with search results.

Search

Click Search to search for SBM items based on specified criteria.

Results

Items meeting the search criteria are added to the Results list. The list displays the Item ID, Title, Owner, Project, State, and Active/Inactive status for each item. Double-click an item to add it to the Associations list, or select an item, and then click Associate.

Item Details

Select an item from the Results list, and then click Item Details to open the SBM User Workspace to that item.

## **Association Options**

Association options are used in the SourceBridge Check Out, SourceBridge Check In, and SourceBridge - Add to Source Control dialog boxes. The Associations area enables you to associate files being added, checked in, or checked out with SBM items in the Results list. Files that are being checked out, checked in, or added to source control are listed under the All Files root folder in the Associations list. Once SBM items are associated with the files, the items are listed under each file.

**TIP** SourceBridge remembers the last SBM item or items associated with source files by automatically selecting them the next time a file is checked out or added to source control. When you check items in, SourceBridge automatically remembers the last item associated with source files if you have opted not to associate items with files on check out. If an item has been closed or you no longer own it, it does not automatically show up in the Results list.

The following Association options are available:

#### Associate

Associate selected files in the Associations list with SBM items in the Results list by selecting the files, and then clicking Associate. Multiple items can be selected by pressing CTRL and clicking each item. Items are associated with files as follows:

- If the All Files root folder is selected, the association is made for all files in that folder.
- If files are selected under the root folder, the association is made for the selected files.
- If an SBM item is selected and no files are selected, the Associate button is disabled.

**Note**: If you associate an SBM item and a file at check in, the version control record in SBM does not contain any check out information.

#### Unassociate

Remove SBM item associations from files by selecting files or items in the Associations list, and then clicking Unassociate. Items are unassociated from files as follows:

- If the All Files root folder is selected, you are asked if you want to remove all associations for all files. Click Yes to remove associations; click No to keep associations intact.
- If a file is selected, you are asked if you want to remove all associations for the file. Click Yes to remove associations; click No to keep associations intact.
- If an SBM item is selected, it is moved from the Associations list.

Note: If you remove the association between an item and a file during check in, the version control record is deleted from SBM.

#### ■ Item Details

Select an SBM item that is associated with a file, and then click Item Details to launch SBM to that item.

## **Accessing SourceBridge Information in SBM**

You have two methods of accessing SourceBridge information in SBM:

Version Control History

The version control history associated with each primary item can be viewed in the Item Details frame for that item. See "Version Control History" on page 23.

Version Control Actions Report

This report type allows you to generate reports based on items associated with files checked in or checked out, date ranges, and users performing version control actions via SourceBridge. See "Version Control Actions Report" on page 23.

## **Version Control History**

In SBM, all checkout and check-in operations performed using SourceBridge are displayed in the Item Details page for individual primary items and can be viewed if you select the Version Control History check box in your SBM user profile. If you choose to record undo check out operations, these are recorded as well. If you select the Cleanup Associations on Undo Checkout option in your SourceBridge user settings, however, all check out associations are deleted.

The Version Control History section contains names of the files associated with an item, the date and time files were checked in and out, the SBM user who performed the source control action, and comments associated with check-in actions. Depending on your source control tool, the version number of the file associated with the SBM item may be displayed as well.

SourceBridge does not need to be installed for you to view the Version Control History in the SBM User Workspace, but if your application uses custom forms, the Version Control History section must be included on the form. If you cannot view the Version Control History section, contact your system administrator.

**NOTE** If your administrator grants appropriate privileges, you can add, modify, and delete version control actions, also referred to as file associations, from within SBM.

## **Version Control Actions Report**

Version control actions can be retrieved by Version Control Actions reports. Version Control Actions reports allow you to access information pertaining to source control files associated with SBM primary items. You can generate reports based on items associated with files checked in or checked out, date ranges, SBM users performing version control

actions via SourceBridge, and more. File association information is also available. For details on working with Version Control Actions reports, refer to the SBM User's Guide.

**NOTE** Privileges granted by your administrator determine if you can create, run, modify, and/or delete reports. In addition, to access Version Control Actions reports, you must be granted the Logon From SourceBridge system privilege.

### SBM Data in the Source Control Tool

SourceBridge can record SBM association information in each file's source control properties for some source control tools. This enables you to trace information related to SBM items from within the source control tool. To enable this feature, select the Tag Source Control Comment With Associations check box in your SourceBridge user settings. For details see "Configuring User Settings" on page 10.

Each time a file is checked in or checked out and associated with an SBM item in the integrated development environment, information about the item is added to the comments entered. Depending on the action you are performing, these comments are stored in the Comment field in the file's check out status properties or the file history Comment field in the source control environment.

**NOTE** Comment fields are commonly used in source control applications that adhere to the MSSCCI standard. They may be accessed differently or not at all, depending on the development environment and source control applications being used.

By default, SourceBridge adds the SBM user's name, login ID, item ID, and comments to the Comment field. Additional information is also stored with each Item ID to allow the item to be uniquely identified in the SBM database. You can customize comment setting in your SourceBridge user settings. For details see "Configuring User Settings" on page 10.

**NOTE** The number of characters that can be appended to the Comment field varies depending on the source control application and the length of the comment entered when the file is checked out. The data appended by SourceBridge may be truncated by the source control application if the total length of the comment exceeds the maximum it allows.