

**Oracle Developer/2000™**  
**Integrated Source Code  
Management**

This document explains the integration of INTERSOLV's PVCS (Polytron Version Control System) with the Developer/2000 Design-time Environment.

This document applies to Developer/2000 Release 2.0 only. For earlier versions of Developer/2000, please refer to the on-line documentation supplied with that release.

**Table of Contents**

- 1 Introduction ..... 2
- 2 Version and Platform Compatibility ..... 2
- 3 Supported Features ..... 2
- 4 Required Setup..... 3
  - 4.1 Installing Developer/2000..... 3
  - 4.2 Installing PVCS ..... 3
  - 4.3 Configuration Files ..... 3
- 5 A Closer Look at the Source Control Dialogs..... 4
  - 5.1 The Check-In Dialog ..... 4
  - 5.2 The Check-Out Dialog..... 5
  - 5.3 The Options Dialog..... 6
    - 5.3.1 The Options Dialog: Project Options..... 6
    - 5.3.2 The Options Dialog: File Options ..... 7
    - 5.3.3 The Options Dialog: Reporting Options ..... 9
- 6 Error Messages ..... 10
- 7 Implementation Details..... 12
- 8 Common Questions and Answers..... 13

## 1. Introduction

PVCS (Polytron Version Control System) from INTERSOLV Corporation is a market-leading source code control and management system for the MS Windows platform family. This product must be purchased separately from INTERSOLV, and installed and enabled on each workstation. Developer/2000 then provides seamless access to the principal version control services and operations that a developer needs on a daily basis, directly from the Developer/2000 design environment.

## 2. Version and Platform Compatibility

Version and Platform compatibility is summarized in the following table:

		PVCS Version and Platform		
		5.2 (Win)	5.2 (Win32s)	5.2 (NT)
Developer/2000 Release & Platform	1.0, 1.1 (Win)			
	1.2, 1.3 (Win)	●	●	
	1.3 (Win95)		●	
	1.3 (NT)		●	●
	2.0 (Win95)		●	
	2.0 (NT)		●	●

Developer/2000 releases 1.0 and 1.1 supported only PVCS Version 5.1. Developer/2000 releases 1.2 and 1.3 supported both PVCS 5.1 and PVCS 5.2. Developer/2000 release 2.0 supports only PVCS 5.2.

Developer/2000 16 bit releases (1.0, 1.1, 1.2, 1.3 and 1.3.2 for Windows) support the 16 bit version of PVCS for Windows. If one of these 16 bit releases is run under Windows 95, they can access the Windows 95 version of PVCS (5.2.20 or higher), but you must first locate the PVCS dynamic link library `pvcsvmw.dll` and make a copy of it with the name `vmw1520.dll`.

Developer/2000 32 bit releases (1.3 and 1.3.2 for Windows 95 or NT) require the 32 bit version of PVCS (5.2.20 or higher) for the corresponding operating system. On Windows 95, use PVCS for Windows 95. On Windows NT, use PVCS for Windows NT.

## 3. Supported Features

Developer/2000 provides menu and dialog options for the following Source Code Management functions:

- Checking in files
- Checking out files
- Assigning symbolic labels to revisions
- Locking revisions
- Unlocking revisions
- Archive reporting (logging revisions and SCM activity)
- Difference reporting

On startup, if PVCS is installed, three menu items are enabled on the **File / Administration** sub-menu: **Check-In**, **Check-Out**, and **Source Control Options**. These menu options are available in all Developer/2000 designer environments - Forms, Reports, Graphics and Procedure Builder. All source code management functions are accessed from these menus and subsequent dialogs.

## 4. Required Setup

Before using PVCS with Developer/2000, you need to do the following:

- Install Developer/2000
- Install PVCS and make sure its interface libraries are accessible
- (Optional) Configure Developer/2000 for easier access to your PVCS projects

### 4.1 Installing Developer/2000

Install Developer/2000 according to the instructions in the Installation Guide, *Installing Oracle Developer/2000 for Windows*. The source control interface to PVCS is installed automatically as part of the installation process.

### 4.2 Installing PVCS

Install PVCS, or configure your workstation to access a networked version of PVCS, in the normal fashion, according to PVCS documentation. If you did not modify your path during installation, be sure that the following PVCS directories are in your DOS PATH variable (set in AUTOEXEC.BAT):

For PVCS 5.2 (Windows): `pvcs_home\WIN` and `pvcs_home\DOS`

For PVCS 5.2 (Windows95): `pvcs_home\WIN95`

For PVCS 5.2 (Windows NT): `pvcs_home\NT`

where `pvcs_home` is the directory where PVCS is installed or accessed.

### 4.3 Configuration Files

There are four environment variables that should be set for optimum performance of the source control interface. Under Windows 3.1 these are set in ORACLE.INI, while under Windows NT or Windows 95 these are set in the registry, in the SOFTWARE/ORACLE key.

DEV2000\_SOURCECONTROL specifies which source control system to use. This should be set to "PVCS". Since Developer/2000 defaults to use PVCS, omitting this variable will not have any noticeable effect in this release. However, as support for more source control systems is added to Developer/2000, setting this variable will ensure that the source control interface functions as intended.

DEV2000\_PROJECT replaces the TVCCFG variable from Developer/2000 release 1.0 and 1.1, and identifies the PVCS project configuration (.CFG) file that should be used. If you do not specify a project configuration file via an the environment variable, you will need to choose one from the *Source Control Options* dialog in each Developer/2000 session.

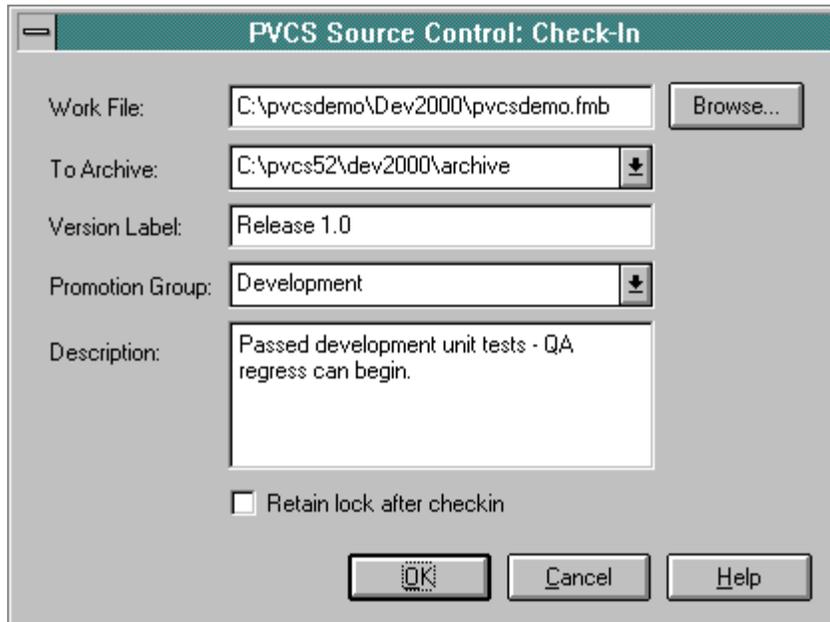
DEV2000\_SCVIEWER controls what program is used to view the results of a source control log or difference report operation. To disable viewing the results, set this variable to null (no value).

DEV2000\_SCONVERT controls whether files are converted to ASCII before checking them in to PVCS, and converted back to binary before checking them out. Unless you are upgrading from using PVCS with a prior version of Developer/2000, and want to preserve this behavior, you should leave this entry set to its default of FALSE.

## 5. A Closer Look at the Source Control Dialogs

### 5.1 The Check-In Dialog

After changes to a module have been tested and saved, use the **File / Administration / Check-In** menu choice to bring up the Check-In dialog:

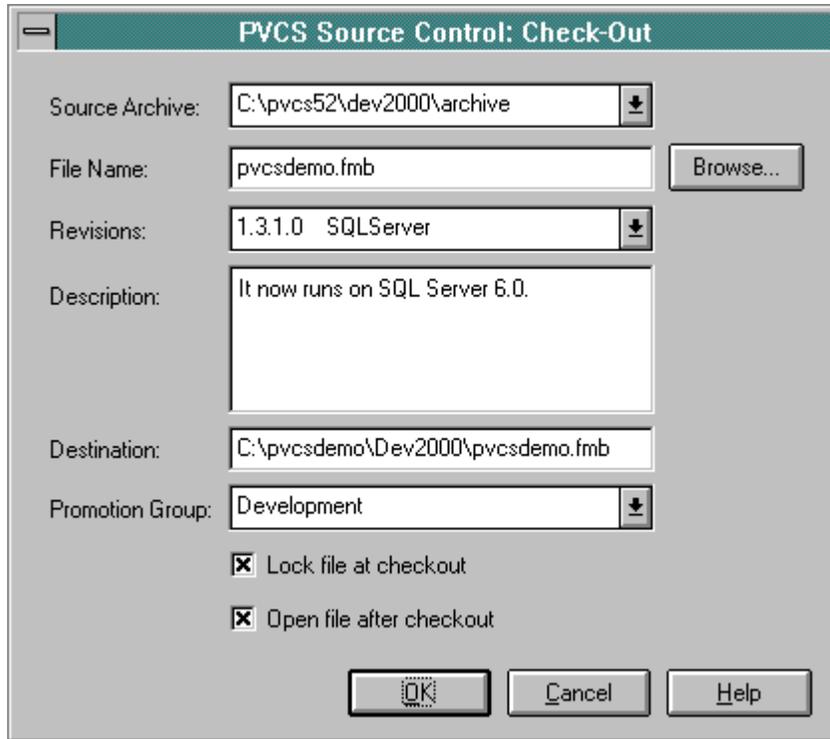


The Check-In dialog has the following controls:

- |                        |  |
|------------------------|--|
| <b>Work File</b>       | Specifies the file to check in to source control. You can enter the name directly , or choose a file with the <b>Browse...</b> button.   |
| <b>Browse...</b>       | Brings up a File Dialog from which you can choose the file to check in.  |
| <b>To Archive</b>      | This poplist contains all available archives for the current project, and its current value specifies which archive directory the file is to be checked in to. If the work file has been previously checked in, this poplist will be set to its archive location, and there is no need to change it. |
| <b>Version Label</b>   | Contains an optional version label. Enter a label in this field to identify the revision with an alphanumeric symbol in addition to the automatically generated PVCS revision number.  |
| <b>Promotion Group</b> | If a promotion model is defined for your PVCS project, this list will be enabled. Choose the Development-level promotion group that is to be assigned to the revision that you are checking in.  |
| <b>Description</b>     | Specifies a description of the changes made for this revision. Although optional, it is recommended that you enter a change description to make it easier to identify revisions at check-out.  |
| <b>Retain Lock</b>     | Specifies whether the file is to remain locked by you after the check-in. By default, this checkbox is unchecked, indicating that after a check-in, you must explicitly check out the file to make further modifications.  |
| <b>OK</b>              | Pressing this button checks the file in to source control.   |
| <b>Cancel</b>          | Pressing this button dismisses the dialog without checking in the file.  |

## 5.2 The Check-Out Dialog

When you need to make changes to a module that is being managed by the source control system, use the **File / Administration / Check-Out** menu choice to access the Check-Out dialog:



The Check-Out dialog has the following controls:

- Source Archive** Shows the archive directories contained in the VCSDIR directive in the PVCS project configuration file. Its value sets an initial directory for the **Browse...** button.
- File Name** Specifies the archive file to check out from source control. You can enter the name directly, or choose a file with the **Browse...** button. If your PVCS project is configured to ignore workfile paths, you can specify either a work file or an archive files, otherwise be sure to specify an archive file only.
- Browse...** Brings up a File Dialog from which you can choose the file to check out.
- Revision** This poplist all shows available revisions and version labels of the selected file. The current selection in the poplist will be the revision checked out. You may choose to check out any of the revisions listed.
- Description** Specifies a description of the changes made for the selected revision. As you select different revisions, the description is updated to reflect the change description for that revision, to make finding the desired revision easier.
- Destination** Specifies the name and directory for the checked-out file. It is automatically updated with the file name and location from which the file was originally checked in. You will need to edit this file name if it's not valid for your workstation or you want to check the file out to a different name or location.
- Promotion Group** If a promotion model is defined for your PVCS project, this list will be enabled. If you intend to lock the file you are checking out, you must choose the Development-level promotion group that will be assigned to the revision that you are checking out.

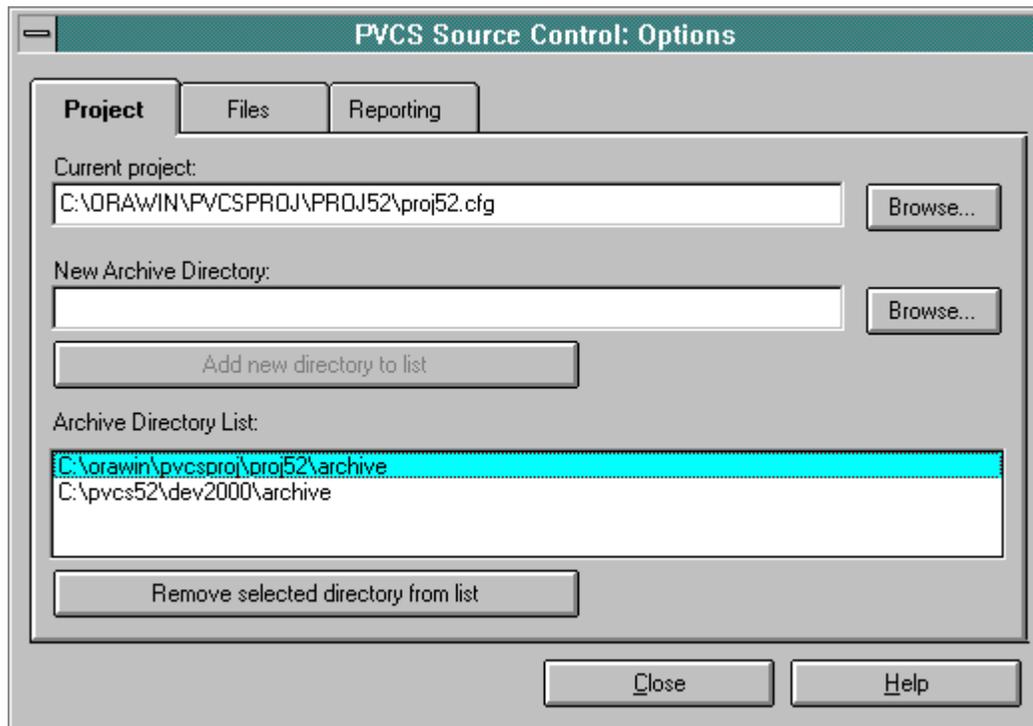
- Lock File** Specifies whether the file is to be locked by you once checked out. If you want to update your local work area with a read-only copy of a particular revision, un-check the checkbox.
- Open File** If you check this box, the file you checked out will be opened in the designer after it has been checked out of PVCS.
- OK** Pressing this button checks out the file from source control.
- Cancel** Pressing this button dismisses the dialog without checking out the file.

### 5.3 The Options Dialog

Use the **File / Administration / Source Control Options** menu choice to access the Options dialog. This dialog provides access to administrative functions for projects and archive files.

#### 5.3.1 The Options Dialog: Project Options

The first tab provides options relating to the PVCS project as a whole:



The Project Options tab has the following controls:

- Current Project** Shows the name of the current PVCS project configuration file. Its initial value is the value of DEV2000\_PROJECT in the ORACLE.INI file. You can enter a project file directly or choose one from a file dialog using the adjacent **Browse...** button.
- Archive Directory (Field)** This field specifies a new archive directory to add to the list of available archive directories in the current project. You can enter a directory, or choose one using the adjacent **Browse...** button.. Once you have entered a directory, add it to the project by using the **Add** button.

- Archive Directories (List)** This list shows the archive directories available in the current project (the value of the VCSDIR directive in the project configuration file). The list is updated as directories are added or removed. To remove an archive directory from the project, select it in the list, and press the **Remove** button.
- Add** This button adds the directory in the **Archive Directory Field** to the available archive directories in the current project. It is enabled when a directory has been entered.
- Remove** This button removes the directory or directories selected in the **Archive Directory List** from the available archives in the current project. It is enabled when there is a selection in the list.
- Note:** If you have disallowed the VCSDIR option in the master project, you will receive an “Insufficient Version Manager access privileges” error should you try to add or remove archive directories. Refer to the “Error Messages” and “Common Questions and Answers” sections for further details.
- Close** Pressing this button dismisses the Options dialog.

### 5.3.2 The Options Dialog: File Options

The second tab in the Options dialog provides functions relating to individual archive files:

The screenshot shows the 'PVCS Source Control: Options' dialog box with the 'Files' tab selected. The 'Archive' field contains 'C:\pvcs52\dev2000\archive'. The 'File Name' field contains 'pvcsdemo.fmb' and has a 'Browse...' button to its right. The 'Revision' field contains '1.3.1.0 SQLServer'. The 'Promotion Group' field contains 'Development'. Below these fields are 'Lock Revision' and 'Unlock Revision' buttons. The 'Log File Name' field contains 'PVCSLOG.TXT'. The 'Log Type' field contains 'List Locked Revisions'. A 'Generate Log' button is located below the 'Log Type' field. At the bottom of the dialog are 'Close' and 'Help' buttons.

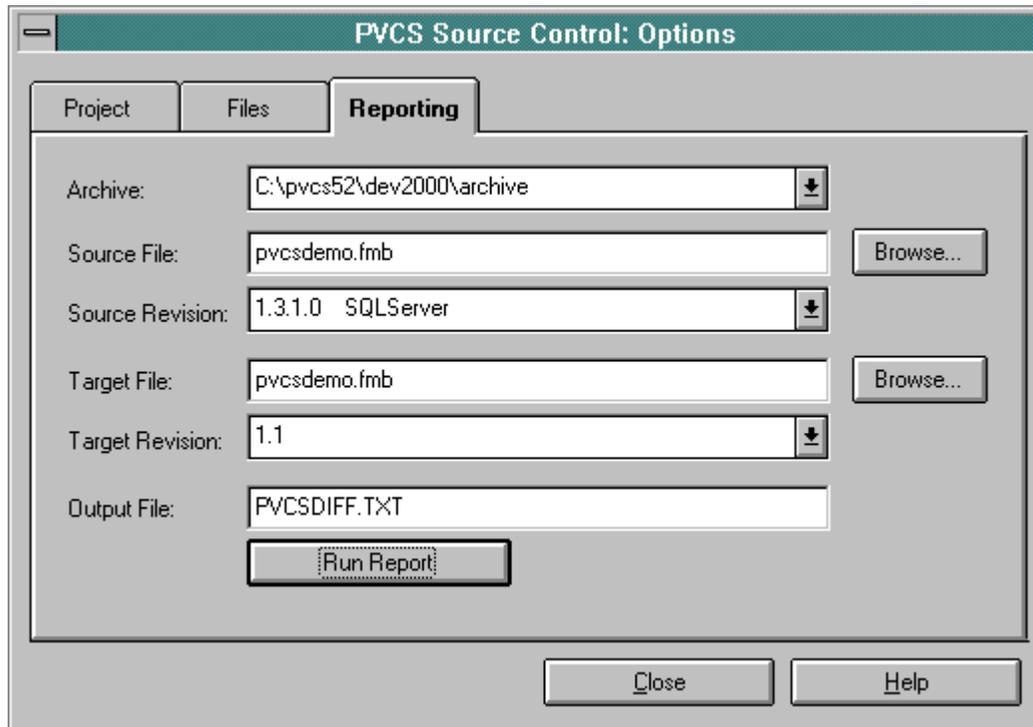
The File Options tab lets you lock or unlock an archive, or generate a log of activity on that archive. It has the following controls:

- Archive** Shows the archive directories contained in the VCSDIR directive in the current PVCS project configuration file. Its value sets an initial directory for the **Browse...** button.

<b>File Name</b>	Specifies the archive file to access. You can enter the name directly , or choose a file with the <b>Browse...</b> button. If your PVCS project is configured to ignore workfile paths, you can specify either a work file or an archive files, otherwise be sure to specify an archive file only.
<b>Revision</b>	<p>This poplist all shows available revisions and version labels of the selected file, as well as having an empty entry, indicating no selection. If you select a specific revision, that revision will be locked or unlocked.</p> <p>If you do not select a revision, the behavior for locking depends on whether there is a promotion model defined. If no model is defined, the tip revision will be locked. If a model is defined, the revision currently assigned to the designated promotion group will be locked. The behavior for unlock with no revision selected is always that all locks you own on the file are released.</p>
<b>Promotion Group</b>	If a promotion model is defined for your PVCS project, this list will be enabled, and will display all Development-level promotion groups in your promotion model. When you lock a revision, the promotion group shown in this list will be assigned to it.
<b>Browse...</b>	Brings up a File Dialog from which you can choose an archive file.
<b>Lock</b>	Pressing this button locks the selected archive file. It is enabled if an archive file has been selected. If you selected a specific revision from the <b>Revision</b> list, that revision will be locked. If you did not select a revision, the tip revision (or the revision currently assigned to the designated promotion group) will be locked. If a promotion model is defined for your PVCS project, the designated promotion group will be assigned to the revision being locked.
<b>Unlock</b>	Pressing this button releases the lock on the selected archive file. It is enabled if an archive file has been selected. If you selected a specific revision from the <b>Revision</b> list, that revision will be unlocked. If you did not select a revision, all locks that you own, on any revisions of the file, will be released.
<b>Log File Name</b>	This field contains the name of the file to which log output is written. You can enter any valid file name. If the file already exists, it will be overwritten.
<b>Log Type</b>	This list shows available log types. Choose a log type that will provide the revision information you desire.
<b>Generate Log</b>	Pressing this button generates the desired revision log of the selected archive file, with output to the specified log file. It is enabled if an archive file has been selected and a log file name specified. If a viewing program is specified via the DEV2000_SCVIEWER environment variable or ORACLE .INI parameter, it will be called to display the output.
<b>Close</b>	Pressing this button dismisses the Options dialog.

### 5.3.3 The Options Dialog: Reporting Options

The third tab on the Options Dialog provides difference reporting functions:



The Reporting Options tab has the following controls:

- Archive** Shows the archive directories contained in the VCSDIR directive in the current PVCS project configuration file. Its value sets an initial directory for the **Browse...** buttons.
- Source File** Specifies the first file to use for difference reporting. You can enter the name directly, or choose a file with the adjacent **Browse...** button. If your PVCS project is configured to ignore workfile paths, you can specify either a work file or an archive files, otherwise be sure to specify an archive file only.
- (Source) Revision** This poplist all shows available revisions and version labels of the source file. The current selection in the poplist will be the revision used for difference reporting.
- Target File** Specifies the second file to use for difference reporting. You can enter the name directly, or choose a file with the adjacent **Browse...** button. This file can (and often will) be the same file as the source file.
- (Target) Revision** This poplist all shows available revisions and version labels of the target file. The current selection in the poplist will be the revision used for difference reporting.
- Output File** This field contains the name of the file to which log output is written. You can enter any valid file name. If the file already exists, it will be overwritten.
- Run Report** Pressing this button generates a difference report between the selected source and target files and revisions. It is enabled if both source and target files, and an output file name are specified. . If a viewing program is specified via the DEV2000\_SCVIEWER environment variable or ORACLE .INI parameter, it will be called to display the output.
- Close** Pressing this button dismisses the Options dialog.

## 6. Error Messages

The following are error messages you may encounter while using the Developer/2000 Source Control Interface Dialogs:

- **D2SCP-001: File access denied by File System**

You do not have file system access privileges to either read the archive file, write the work file, or write log or report output. If you believe you should have file system access to these files, contact your system administrator.

- **D2SCP-002: Insufficient Version Manager access privileges**

You do not have PVCS privileges to access the archive you had specified. If you believe you should have access to that archive, contact your PVCS administrator. You will also see this error if changing archive directories has been disabled in the Master Project and you attempt to change them in the Project Options tab of the Options dialog.

- **D2SCP-003: Archive already exists**

This indicates an internal error and should not be encountered. If it persists after repeating the operation you attempted, contact Oracle Customer Support.

- **D2SCP-004: Cannot find the specified archive**

You entered or selected a file that was not an archive, when an archive file is required. A common cause of this is selecting the work file instead of the archive file (for example, MYFORM.FMB instead of MYFORM.FMV). Use the **Browse...** button to choose an archive file.

- **D2SCP-005: Invalid filename: Drive or path is nonexistent, or filename contains invalid characters**

The filename you entered is not a valid operating system file name. Check the file name syntax for errors.

- **D2SCP-006: File is in use by another process**

The file you are trying to access is in use by another PVCS user. If you retry the operation after a short wait, it will generally succeed.

- **D2SCP-007: Conversion Failed. Workfile may be read-only or an unsupported type.**

There are two situations that cause this error.

1. Your work file may be read only. This will happen if you check out the file without locking it, and then later lock it from the Options Dialog. You will need to use the Windows File Manager to make the file writeable before proceeding.
2. You attempted to check in or out a file that is of a type that Developer/2000 does not recognize. In this case, check the file in or out using the stand-alone PVCS interface. Note that you can check out any file from Developer/2000, but can only check in files that Developer/2000 recognizes. This is because Developer/2000 can only determine if it's a supported file type from the work file. When checking in, you have the work file, so Developer/2000 tests the file before check-in. When checking out, the file is first checked out to obtain the workfile. Only then can Developer/2000 test the file. So you can safely ignore this error on checkout if you know that you are checking out a non-Developer/2000 file type.

- **D2SCP-008: Invalid or insufficient values**

This indicates an internal error and should not be encountered. If it persists after repeating the operation you attempted, contact Oracle Customer Support.

- **D2SCP-010: Specified version label already exists**

You specified a version label in the Check-In dialog that already exists for the file you are checking in. PVCS requires version labels to be unique - change the label. To see labels in use, use the Log feature from the File Options tab of the Options Dialog.

- **D2SCP-011: Specified revision does not exist**

This indicates an internal error and should not be encountered. If it persists after repeating the operation you attempted, contact Customer Support.

- **D2SCP-012: Invalid configuration file specified**

The file you chose in the Project Options tab of the Options Dialog is not a valid PVCS configuration file. Select another, valid, file. If you encounter this error when attempting to access the Check-In or Check-Out dialogs, it means that the configuration file specified in the `DEV2000_PROJECT` environment variable is invalid. You should modify the variable, or use the Project Options tab of the Options Dialog to set a valid configuration file.

- **D2SCP-013: You must first choose a project from 'Source Control Options'**

You tried to access the Check-In or Check-Out dialogs, but had not specified a project, either through the `DEV2000_PROJECT` variable in the `ORACLE.INI` file, or on the Project Options tab of the Options Dialog. You need to go to the Project Options tab and select a project before continuing.

- **D2SCP-014: Unable to update project configuration file.**

You tried to add or remove archive directories from the project configuration file, but do not have write permission to the file or directory where the file is located. Consult your PVCS or system administrator if you believe you should have this access permission.

- **D2SCP-015: Revision is not locked.**

You tried to check in a revision you do not have locked, or unlock a revision that you have not locked (from the File Options tab). If you have made modifications, lock the revision from the File Options tab before checking it in.

- **D2SCP-016: Unable lock specified Revision.**

You tried to check out a revision with a lock from the Check-Out dialog, or lock a revision from the File Options tab, but PVCS was unable to grant you the lock. There are several possible causes for this:

- The revision is already locked by you or someone else. Use the Log feature to see who has the lock, and if you have already locked the revision, check it out without requesting a lock. If someone else has locked the file, wait for them to release the lock before checking out the file for modification.
- Your project does not allow multiple locks, and the revision is already locked. Either wait for the revision or file to become available, or consider allowing multiple locks per file in the project.
- If your project has a promotion model, the promotion group you specified may already assigned to a locked revision. Either wait for that promotion group to become available (not assigned to a locked revision) or use another development-level promotion group.

- **D2SCP-017: Specified directory does not exist**

You specified a directory that does not exist. A common cause of this error is checking out a file where the location from which it was checked in does not exist on your workstation. If this is the case, edit the destination field to point to an existing directory.

- **D2SCP-018: Unable to redirect output to file**

The file name you specified for the log or difference report output is invalid, or the file could not be opened for writing. Specify a valid, writeable file.

- **D2SCP-100: PVCS Error number - keyword**

An error was returned from PVCS that the Developer/2000 source control interface could not process. Consult your PVCS documentation using the error number or error keyword to look up the error, and take action accordingly.

## 7. Implementation Details

Note: The following applies *only* if you set DEV2000\_SCCONVERT to TRUE for backward compatibility with Release 1 of Developer/2000.

When you check in certain Developer/2000 objects (Forms, Menus, Reports, Displays, PL/SQL libraries) the binary file is automatically converted to the text-file equivalent, and the text file is checked in to the source control. For example, if you checked in MYFORM.FMB, Developer/2000 would automatically convert MYFORM.FMB to MYFORM.FMT (the text equivalent) and then check MYFORM.FMT in to source control.

Similarly, when you check out an archived file, it converts the text version of the file to the equivalent binary format that can be read by the designer interfaces. If you were to check out MYFORM.FMT, it would be converted to MYFORM.FMB so that you could edit it.

Archiving is done on the text version of the file to permit more meaningful Difference Reports to be generated between different revisions of a file. While PVCS does support archiving binary files, difference reporting between revisions of binary files is not possible.

This file conversion can lead to extra files being left in your working directory, depending on PVCS settings. If your project is configured to make working files read-only after check-in, you will have both the binary file, and a read-only text-format file, present in your directory. However, if your project is configured to delete working files after check-in, only the binary file will remain present in your working directory.

## 8. Common Questions and Answers

- After I check in files and assign version labels from within Developer/2000, the PVCS configuration manager interface doesn't show the new files or revisions. What do I do?

*The project folder needs to be updated with the new information that's in the archives (new files and revisions). To do this, choose **Update Project Folder...** from the PVCS top-level **Project** menu. The new files and revisions should then be visible in PVCS' "Folders" window.*

- If I run more than one Developer/2000 product simultaneously, the source control menu options are only enabled in one of them. Why?

*PVCS on Windows is not reentrant. This means that only one program (either a PVCS-enabled program like the Developer/2000 designers, or the PVCS interface itself) can access PVCS services at a time. You will need to exit both the program that has the menus enabled, and the one from which you wish to access PVCS services. Then re-start the one in which you need PVCS access.*

- When trying to check out a Report, I chose the .RDV (archive file) but I still get an error that PVCS is unable to find the archive. What's going on?

*Even though you chose an .RDV file, it may not have been the archive. Developer/2000-Reports writes its intermediate (ASCII) files to an extension .RDV before checking them in. (See the Implementation Details section.) Be sure that you are selecting an .RDV file from the archive directory, and not the working directory. There are three ways to help prevent this confusion:*

- *Set the PVCS project option to delete work files after check-in. This will prevent the Reports intermediate .RDV files from remaining on your disk.*
- *Change the suffix rule, so that when an .RDV file is checked in, it is given a different suffix, say .VRD. Then you can be sure to look for .VRD's, not .RDV's, when checking out.*
- *Configure your project to ignore workfile paths when searching for archives. This will allow you to specify the work file (in this case, .RDF), and not the archive, at checkout.*

*These options are available from the PVCS configuration manager user interface, from the **Configure Project...** menu choice.*

- Whenever I lock a file (or check out with a lock) the User ID is set to "UNKNOWN". This lets other people check in or unlock the file. How can I make sure the proper username is used?

*There is a PVCS project configuration option, "Login Source" in the "network" section of the PVCS project configuration options (in the PVCS Version Manager Interface) which you can use to prevent this from happening. With this option, you'll be able to define how PVCS determines the current user ID. For example, if you use a NETWARE network, you can instruct PVCS to use the current NETWARE Login ID. On Windows NT, you can use the NT Login ID by choosing the "HOST" Login source. Consult your PVCS documentation for further details.*

- Is there anything I can do to allow me to select work files, not archive files, for check-out?

*There is a PVCS project configuration option, "Ignore Workfile Path" in the "Archive Searching" section of the PVCS project configuration options (in the PVCS Version Manager Interface) which you can use. If you turn on this option, you'll be able to select either work files or archive files in Developer/2000's "Check Out" and "Source Control Options" dialogs.*

- I have configured my Master Project to disallow changing archive directories. In the PVCS Version Manager interface, I can't change archive directories in a sub-project, which is correct. But in Developer/2000, I was able to. Afterwards, from the PVCS version manager interface, I received an error that VCSDIR is not allowed in the project configuration file. What's going on?

*The PVCS Version Manager interface looks for a default MASTER.CFG file in its root directory, and that's probably what it found, and why it raised the error after you'd changed archive directories in Developer/2000. For Developer/2000 to know about the master configuration file, you must configure PVCS using the VCONFIG command. This encodes the name of your master configuration file in the PVCS libraries, and ensures that no one will be able to accidentally change the archive directory list. Refer to the sections on "Master Configuration Files" and "VCONFIG command" in your INTERSOLV PVCS Command-Line Reference Guide.*