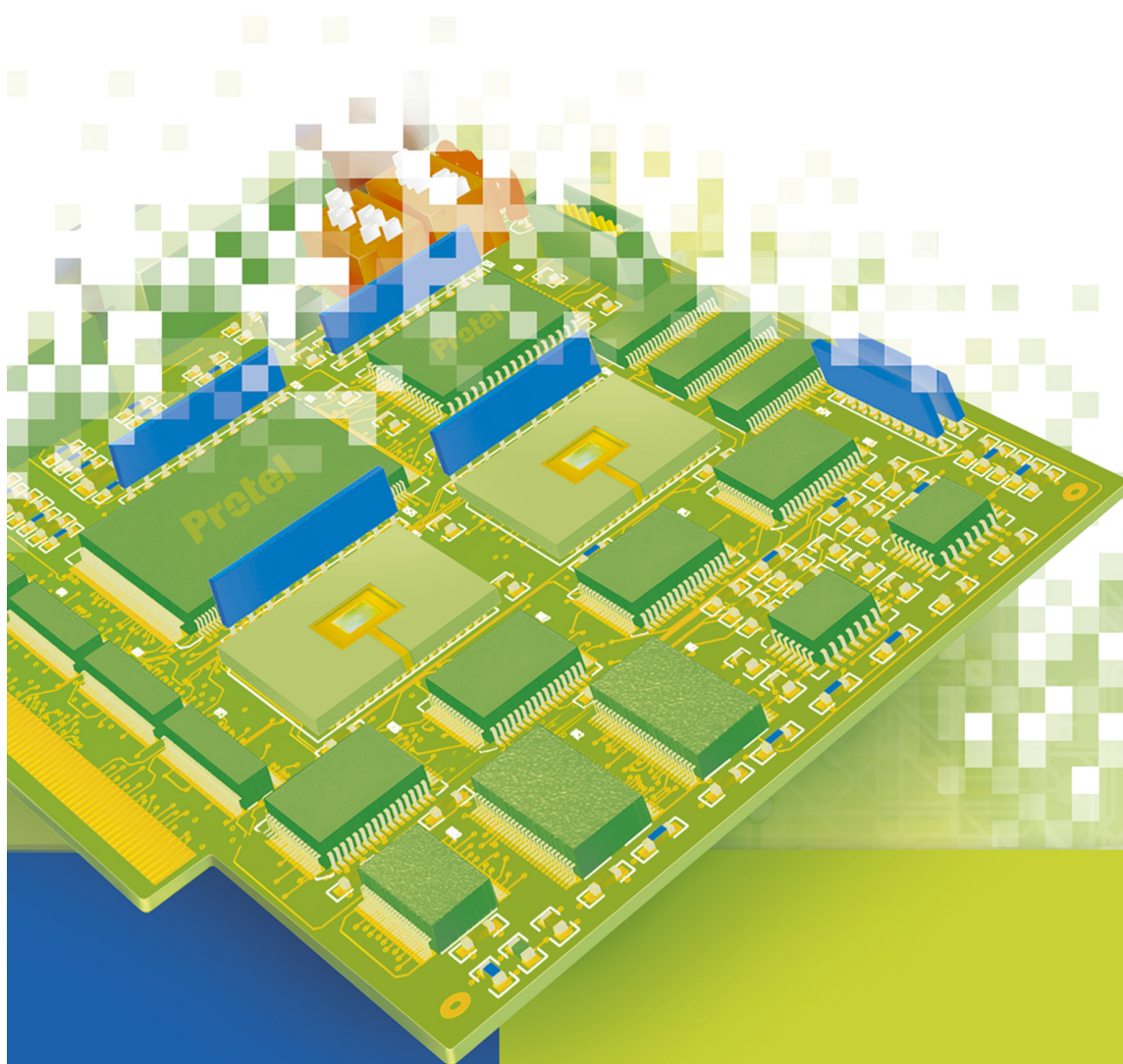


Version Control System

***Protel*DXP™**

Tutorial



Protel®

Board-level design system from Altium.

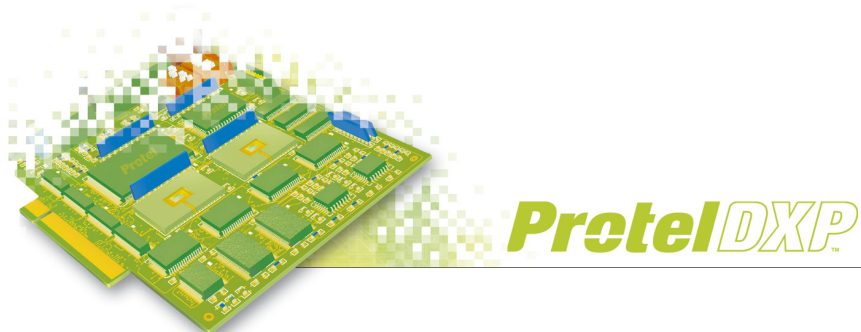


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Interfacing to a Version Control System

You can interface directly between Protel DXP and popular third party version control systems (VCS), including Visual SourceSafe®. You can add an entire project or individual documents within a project to your VCS.

This tutorial looks at adding projects and documents to your VCS and then checking them out for use and checking them back in again to the VCS using the DXP menus. It uses the Visual SourceSafe® version control software as an example only. For more information about your VCS, please refer to that software's documentation.

When you run Version Control commands, you launch your version control software and open the database that the active project resides in. Once projects and documents have been added to the VCS, you could open your VCS from within DXP if required by selecting **Project » Version Control » Run VCS**. Your version control software will be started and the corresponding database and project folder for the active project will be opened. When using the other DXP Version Control commands however, you do not need your VCS open first.

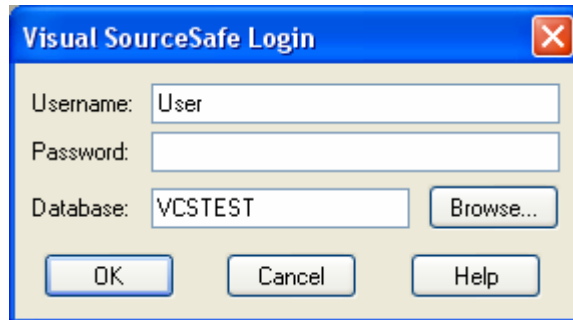
Adding projects and documents to the VCS

Before using version control, you must add the project and related documents to your VCS. You may wish to create a storage area in your VCS first and then link to this area when adding the project and any of its associated documents, or you can create a new folder for your project files in the VCS database from within DXP.

Adding projects to the VCS

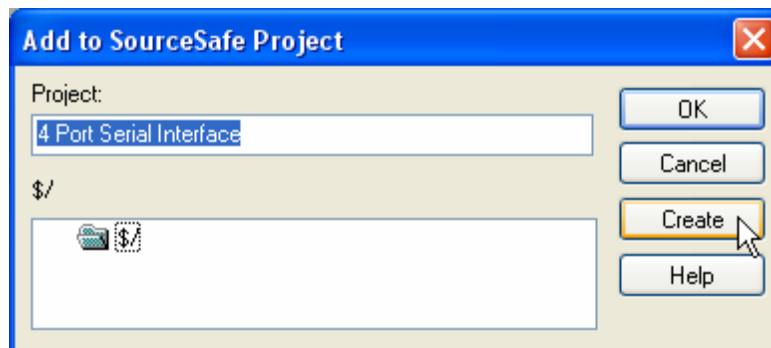
To add the selected project to the VCS:

1. Open the project that you wish to add to the VCS (**File » Open Project**).
2. Right-click on a Project name in the **Project** panel and select **Version Control » Add Project to Version Control**.
3. Log in to the VCS as applicable. The dialog below shows the login window for Visual SourceSafe®.



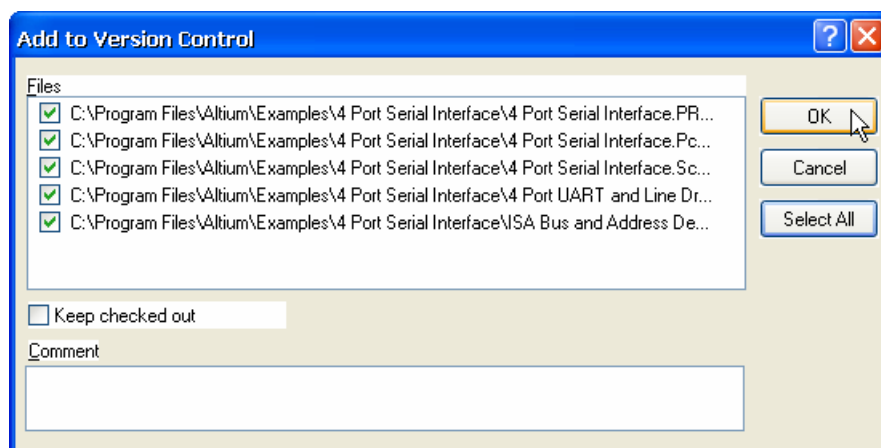
Enter the details required and click **OK**.

4. The *Add to SourceSafeProject* dialog displays.

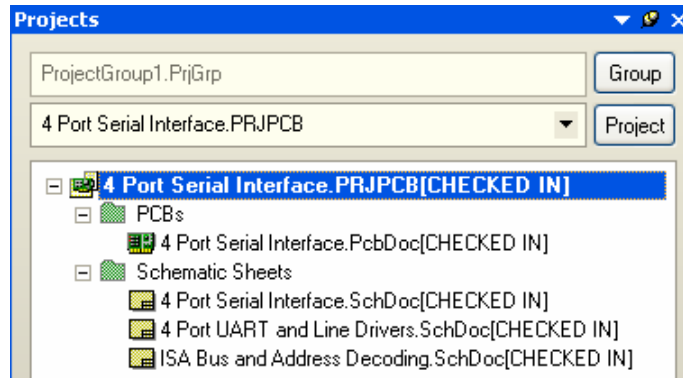
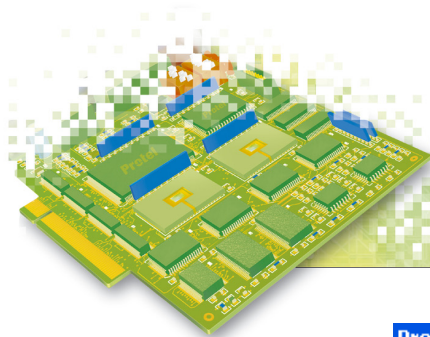


5. Click on **Create** to create a new folder for the project in the VCS database. By default, the folder created for the project will have the project's name (without the extension).

Alternatively, select a folder that has already been created previously using the VCS software. Click **OK**. The *Add to Version Control* dialog displays.



6. Select the documents in the project that you wish to come under version control. Click on **Select All** to easily select all the documents that have links to the project (as stored in the project file). Click **OK**.
7. The project file and selected documents are linked to the VCS and the words [CHECKED IN] are added to the document names in the **Projects** panel. Any documents that were not included in the addition will have the suffix [NOT IN] next to their names.

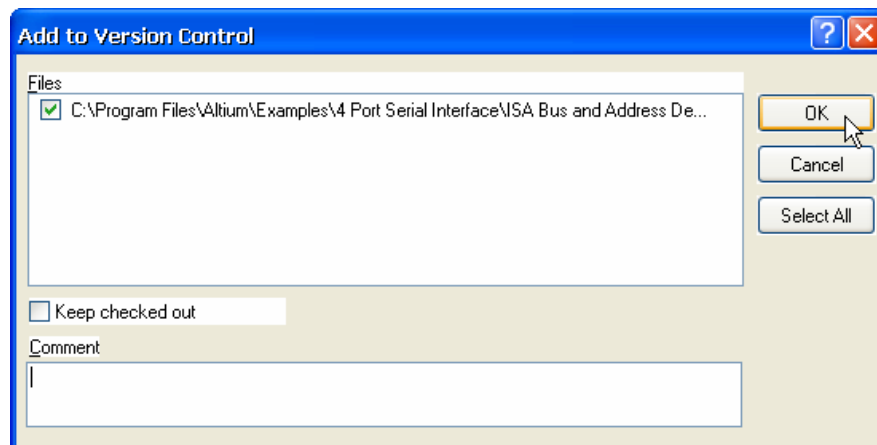


Adding a document to the VCS

Only documents that have already been added to a project in DXP can be added to the VCS. The project file has to be added (linked) to the VCS first as well. See *Adding projects to the VCS* above.

Note that if the document you want to add is active (open), it should be saved prior to adding to the VCS, or else the last saved version of the file will be added to the VCS and not the open document.

1. Make sure that the document you wish to add to the VCS database is selected in the **Projects** panel.
2. Select **Project » Version Control » Add to Version Control** and login to the VCS as applicable.
3. The *Add to Version Control* dialog displays showing the document you selected from the **Projects** panel.



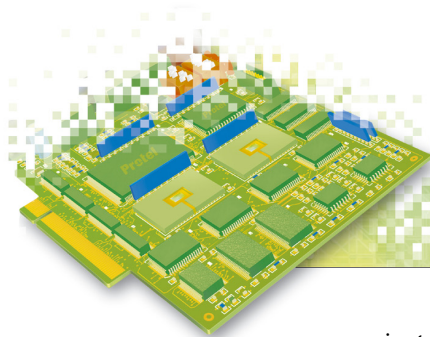
4. Click **OK**. The file will be added to the VCS database, in the same folder as the project file and the suffix [CHECKED IN] will appear next to the entry in the **Projects** panel.

Note: If you have dragged the document into the VCS directly (from outside DXP), use the Refresh command (**Project » Version Control » Refresh Status**) and the document will appear as [CHECKED IN] in the **Projects** panel.

Removing projects & documents from the VCS

Removing a project from the VCS

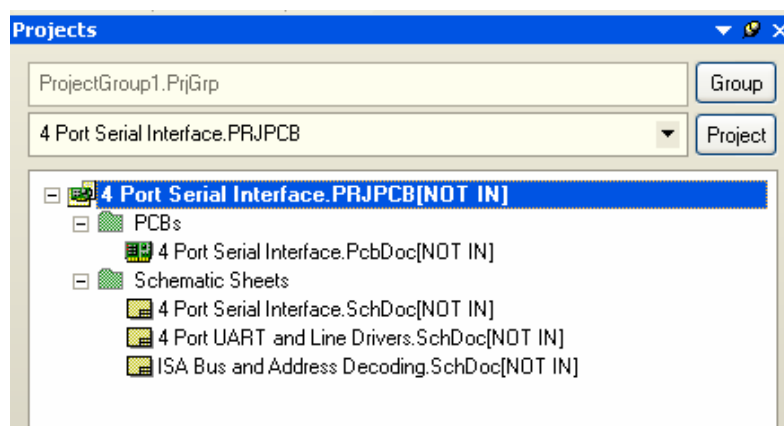
By removing a project from the VCS, it will no longer be associated with version control and the link between DXP and the VCS software will be removed. Removing the project alone does not remove all associated project documents from your VCS however. They will appear as checked in again if the



project is added back into the VCS and a refresh is carried out to resynchronize the system (**Project » Version Control » Refresh Status**).

To remove a project to the VCS:

1. Right-click on the Project name that you want to remove in the **Project** panel and select **Version Control » Remove Project from Version Control** and log in to the VCS as applicable.
2. The *Remove from Version Control* dialog displays with the entry for the project already selected. The associated project documents are also listed and you can select any or all of these for removal from the VCS as well.
3. Click **OK**. The project and any other nominated documents will be removed from the VCS and the status suffixes for the all entries under this project will change to [NOT IN] in the **Projects** panel.



Removing a document from the VCS

To remove the selected document from your VCS:

1. Make sure that the document you wish to remove from the VCS is selected in the **Projects** panel.
2. Select **Project » Version Control » Remove from Version Control** and login to the VCS as applicable. The *Remove from Version Control* dialog displays with the entry for the document already selected.

If the active or selected document is currently checked out, a dialog displays asking for confirmation to proceed with the removal from the VCS. This is especially important as other users may have checked out the file you want to remove from the VCS.

3. Click **OK** and the document will be removed from the VCS. The status suffix for the removed document will change to [NOT IN] in the **Projects** panel.

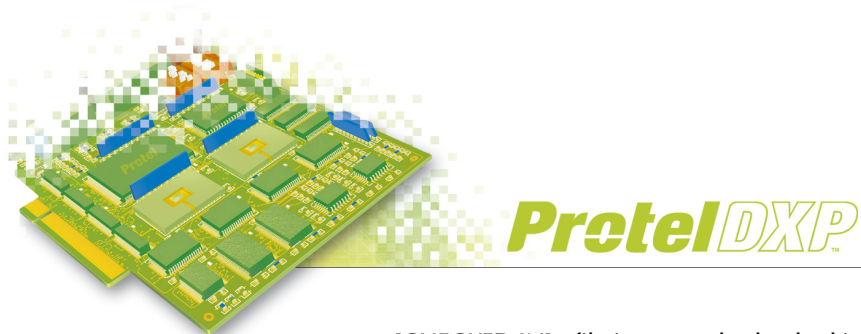
Refreshing the status

At any time you wish to make sure the status of your documents is up to date, use the Refresh Status command. This command can be used at any time, but is especially useful when you have performed an action, such as checking in or out, directly in the VCS software.

1. Select the **Project » Version Control » Refresh Status** command.
2. The link between the active project in DXP and the project that resides in the VCS is checked and the status of the project and its related documents is refreshed.

The corresponding status is updated in the suffix next to each document's name in the **Projects** panel and can be one of the following:

- [NOT IN] - file has not been added to the VCS.



- [CHECKED IN] - file is currently checked in to the VCS.
- [CHECKED OUT BY ME] - file is currently checked out by you alone.
- [CHECKED OUT] - file is currently checked out by more than one user (ASCII file) or another single user (binary file).
- [CHECKED OUT BY ME EXCLUSIVELY] - file is checked out by you alone and is a binary file.

Checking documents in and out

Once projects and documents have been added to the VCS, you can check them out when you wish to work on them and then check them back into the VCS when you have completed the work.

Checking out documents from the VCS

When you check out a document from the VCS you actually check out the copy of the selected document that resides in your VCS.

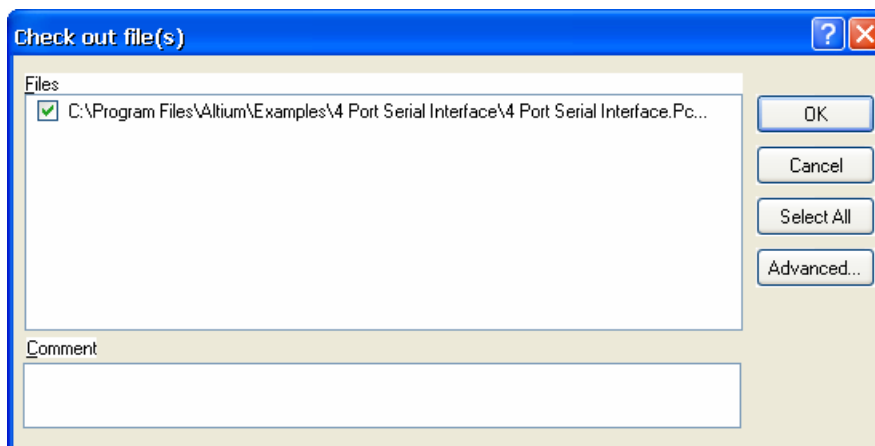
You should close and reopen the document after using this command, in order to display and work on the checked out version of the file. If the selected document is open in the main design window, you should close and reopen the document after using this command, in order to display and work on the checked out version of the file.

Multiple checkouts

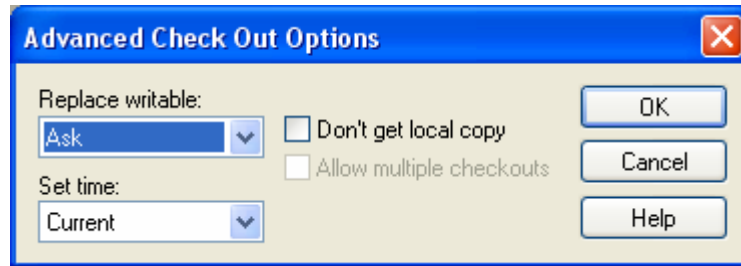
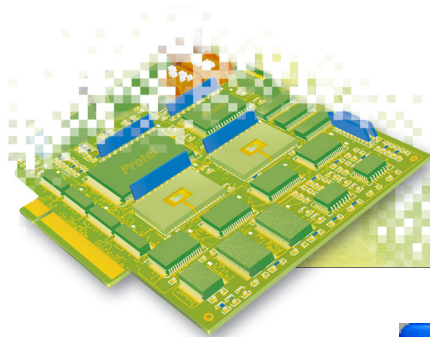
Allowing multiple checkouts is a feature in your VCS software. For information on this feature, consult your VCS software documentation.

It is not possible when working with binary files to have multiple checkouts of the same document. In this case, only one person may work on such a file at any one time. If you are the only person to check out a binary file, the **Projects** panel will reflect this using the suffix: [CHECKED OUTBY ME EXCLUSIVELY]. If a binary file is already checked out by another user, the suffix will be [CHECKED OUT] and the command to check out this particular document will be unavailable.

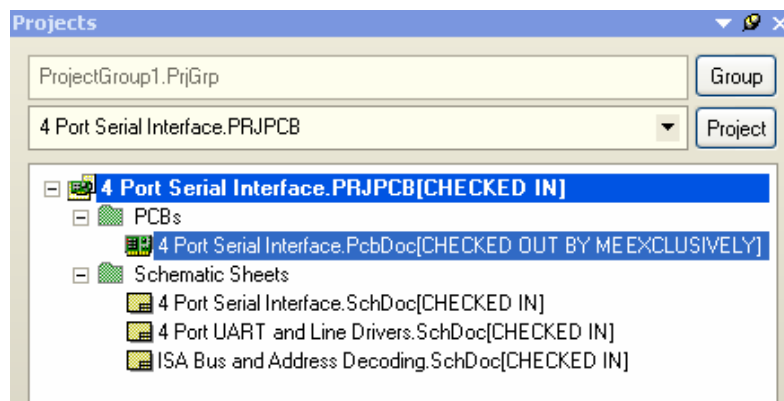
1. Make sure that the document you wish to check out is selected in the **Projects** panel.
2. Select **Project » Version Control » Check Out** and login to the VCS as applicable.
3. The *Check out file(s)* dialog appears, with the document name(s) selected ready for checking out.



4. Click on the **Advanced** button provides access to advanced check out options for your particular version control software, as indicated below.



5. Click on **OK** and the version of the document stored in your VCS will be checked out to your work area. The status suffix attached the document's name in the **Projects** panel will change to [CHECKED OUT BY ME EXCLUSIVELY], if you are the only person to currently have the file checked out.



If more than one person has checked out the file, or if you have checked in your copy but it is still checked out by other users elsewhere, the status will be [CHECKED OUT].

Undoing a Checkout

If you have previously checked out a document from your VCS and then wish to undo the check out, there is an Undo command for this action.

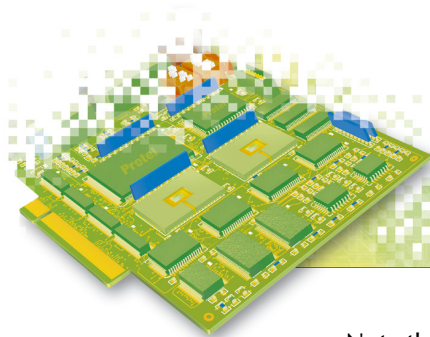
If using this command and the document is still checked out by other users, the suffix for the document's entry in the **Projects** panel will remain as [CHECKED OUT].

The way that the local copy of the document is handled when using this command depends on the options set up in your VCS. For example, the local file may be overwritten with the previous version kept in the VCS, in which case all your changes will be lost. Consult your VCS documentation for more information.

1. Make sure that the document you wish to check out is selected in the **Projects** panel.
2. Select **Project » Version Control » Undo Check Out** and login to the VCS as applicable.
3. The *Undo Check Out* dialog appears, with the document name(s) selected.
4. The **Advanced** button provides access to advanced Undo Check Out options for your particular version control software. These could include how to treat the local copy of the file when performing the undo.
5. Click **OK**. The check out of the document will be cancelled and the previous version of the document will be retained in the VCS. The status suffix for the document's entry in the **Projects** panel will change to [CHECKED IN].

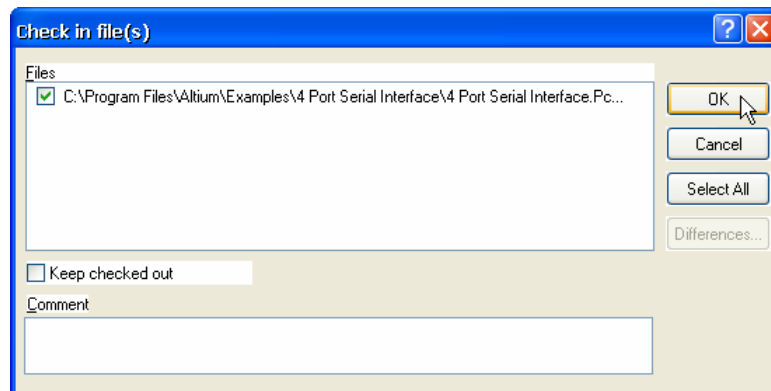
Checking in documents to the VCS

When you have finished working on the document you had checked out, you need to check it back in to the VCS.



Note that if the document you want to check in is active (open), it should be saved prior to checking in, or else the last saved version of the file will be checked in to the VCS and not the open document.

1. Make sure that the document you wish to check in is selected in the **Projects** panel.
2. Select **Project » Version Control » Check In** and login to the VCS as applicable.
3. The *Check in file(s)* dialog displays with the entry for the document selected ready for checking in.



4. Click **OK**. The document will be checked into the VCS, in accordance with check in options defined for your version control software.
5. The status suffix for the document will change to [CHECKED IN] in the **Projects** panel.

If you have checked in your copy but it is still checked out by others elsewhere, the status suffix for the document's entry in the **Projects** panel will remain as [CHECKED OUT].

Getting the latest copy

You may need to get the latest copy of the selected document that resides in your VCS. The read/write status of the document copied to your work area depends on the options set in your VCS software. By default, the Get Latest feature normally places a read-only copy in your work area. Check your VCS documentation for details.

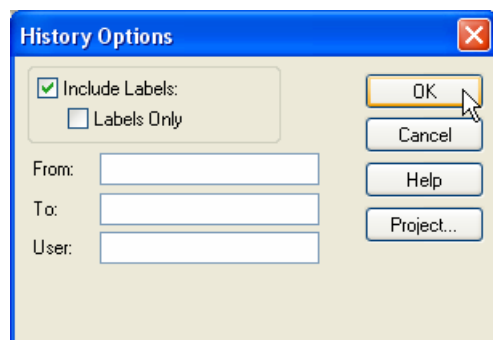
1. Make sure that the document you wish to get the latest copy of is selected in the **Projects** panel. If the selected document is also open, you should close and reopen the document after using this command, in order to display the latest copy of the file from the VCS.
2. Select **Project » Version Control » Get Latest** and login to the VCS as applicable.
3. The *Get Latest Version* dialog displays with the document already selected.
4. The **Advanced** button provides access to advanced options for your VCS software, such as how to treat a writeable copy of the file already in existence in your working folder.
5. Click **OK**. The latest version of the document stored in your VCS will be copied to your work area. Note that the document is not checked out.

Showing a document's VCS history

You may wish to view the history of the selected document with respect to its entry in your VCS.

1. Make sure that the document whose VCS history you wanted shown is selected in the **Projects** panel.
2. Select **Project » Version Control » Show History** and login to the VCS as applicable.

You may get a *History Option* dialog prior to seeing the history of the document, such as the one below. This will depend on VCS software you are using.



3. Click **OK** and the history of the selected document inside the VCS will be shown.

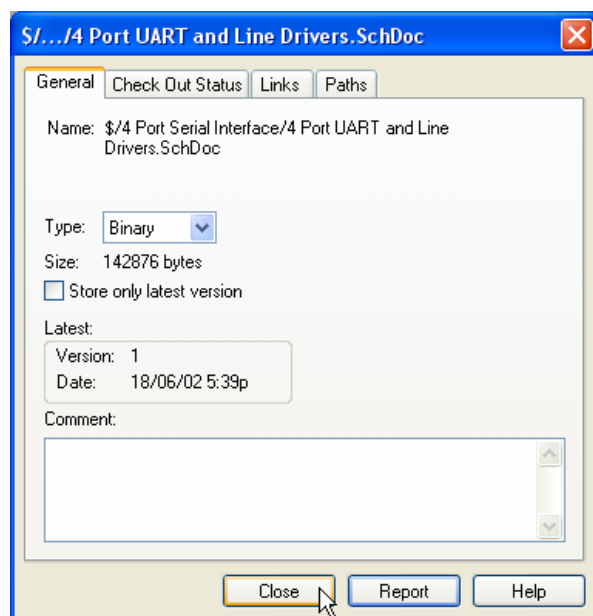
The information shown will depend on the version control software you are using. Consult your VCS software documentation for more information on these dialogs.

Showing a document's properties

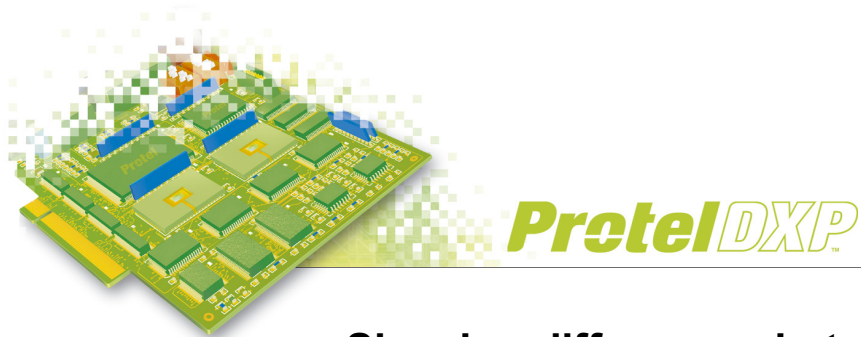
You can display the property information about the selected document with respect to its entry in your VCS. Consult your VCS software documentation for information on these dialogs.

1. Make sure that the document you wish to show the properties of is selected in the **Projects** panel.
2. Select **Project » Version Control » VCS Properties** and login to the VCS as applicable.

A dialog displays with property information relating to the selected document. This information will depend on the version control software you are using. The following dialog shows the properties displayed using Visual SourceSafe® as the VCS.



3. Click on **Report** to print or copy the properties or save them to a file.
4. Click **Close** to exit the dialog.



Showing differences between documents

You can show the differences between the copy of the selected document in DXP and the master copy of the document in the VCS. Consult your VCS software documentation for more information on the show differences features.

1. Select the document in the **Projects** panel that you wish to show the differences between its copy and its master copy in the VCS. If you are showing differences between a copy of the active document in DXP and its master copy in the VCS, save the document first; otherwise the comparison is carried out on the last saved version of the file.
2. Select **Project » Version Control » Show Differences**. The Show Differences feature in your VCS will be launched and any dialogs that appear will depend on the VCS software you are using.

The following results are expected:

- If the two documents being compared are identical, you will be shown that no differences exist.
 - If the two files are ASCII files, the differences can normally be displayed.
 - For binary files, you will only be notified that differences exist. This is because binary file differences cannot be viewed.
3. Click **OK** to close the dialog.

Thanks for participating in this tutorial.