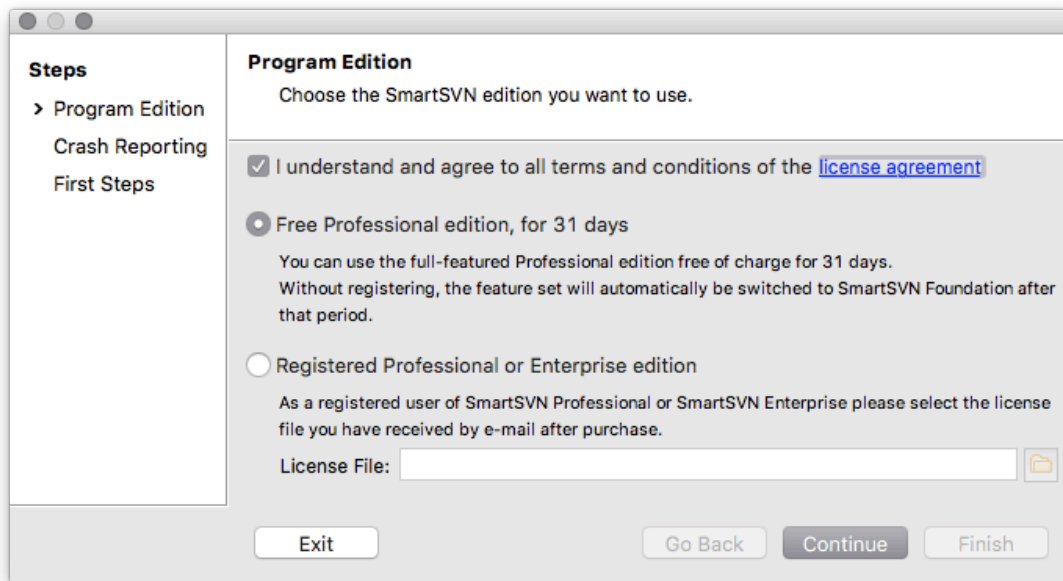


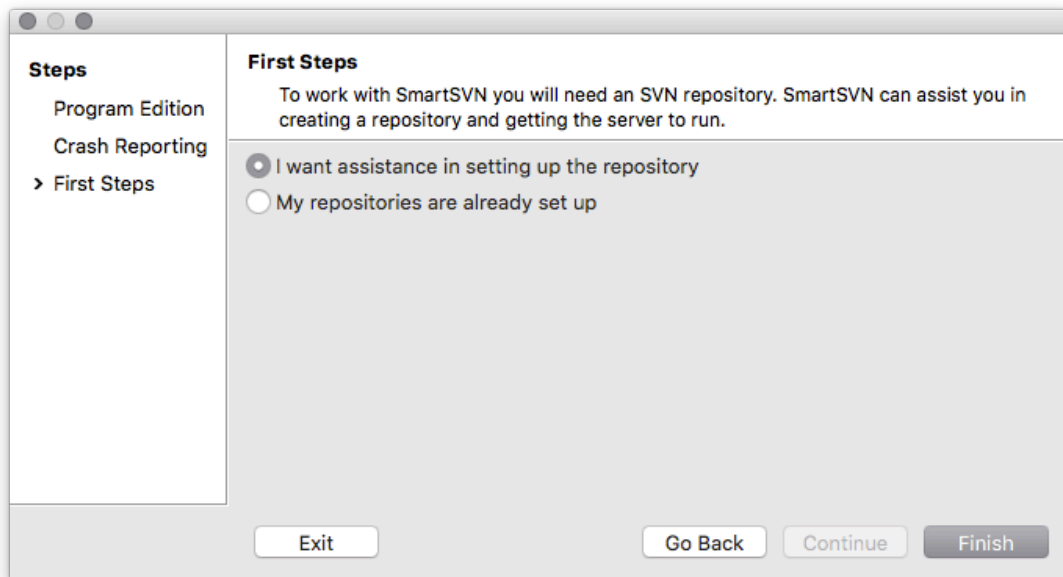
SVN Tutorial (Mac)

Setting up the server

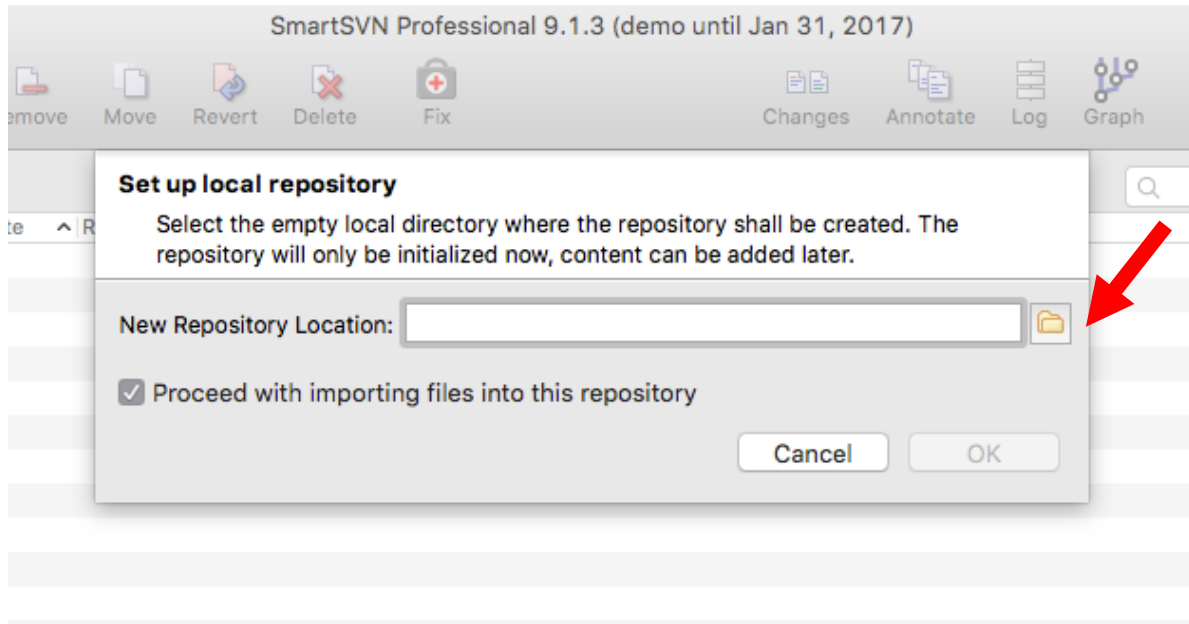
1. Download SmartSVN from <http://www.smartsvn.com/>
 - a. Extract SmartSVN, and open it



2. Agree to the terms and conditions, select the free professional edition, then click continue
 - a. Agree to send crash reports if you want to, then click continue



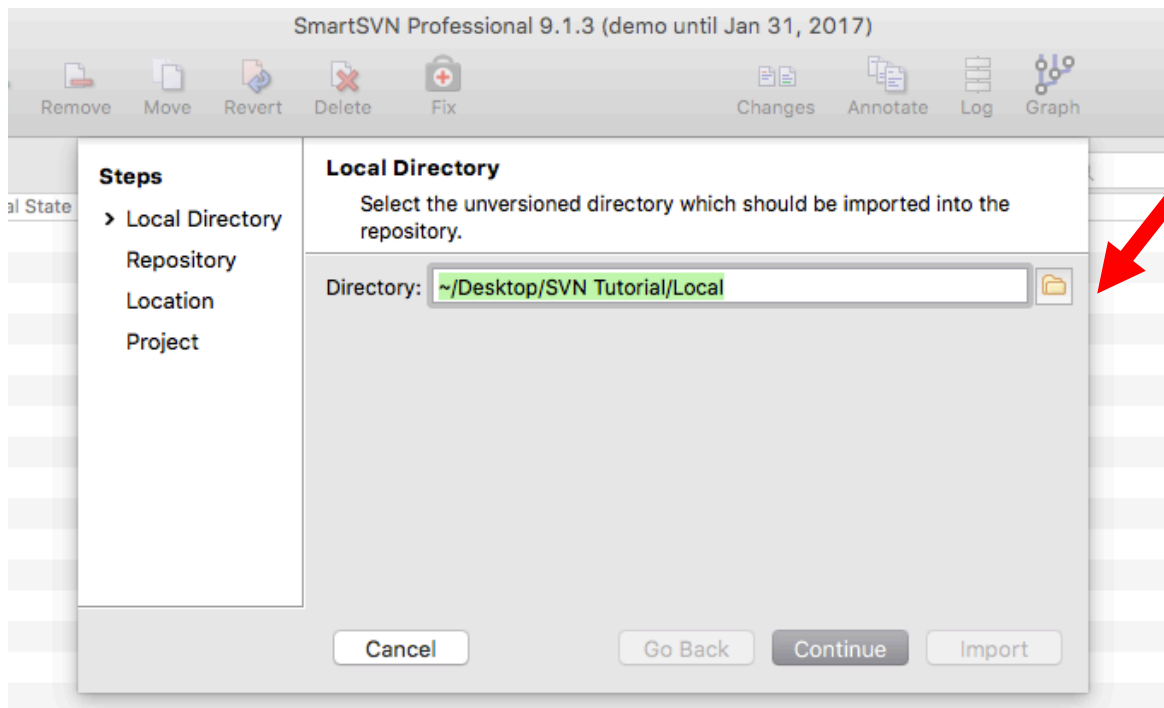
3. Select "I want assistance in setting up the repository", and click finish



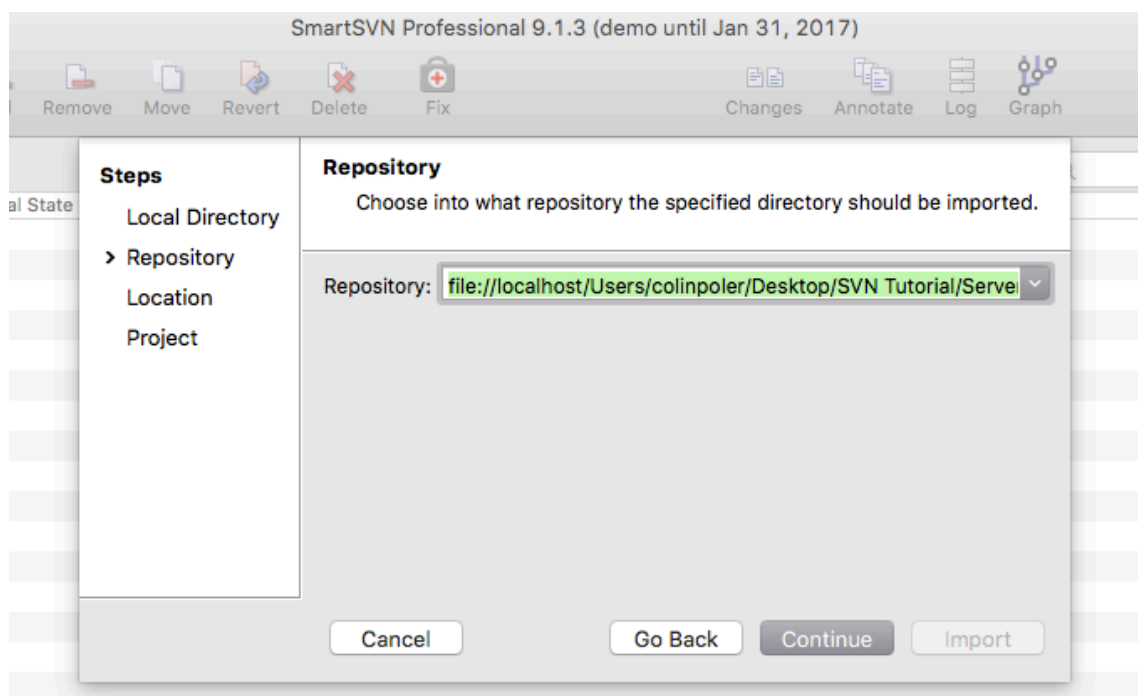
- a. Click the folder icon next to the text box
- b. Navigate to your desktop, and make a new folder "SVN Tutorial"
- c. Navigate into that folder, make a new folder "Server", and click open
- d. Click OK

The "SVN Tutorial" repository we'll set up is **only** on your computer. There's **no way to mess up** the team repository by playing with the "SVN Tutorial" repository. You can and should experiment with this tutorial repository! Furthermore, if you're ever afraid of messing up the team repository, you can always test out the action on the tutorial repository to see what it does!

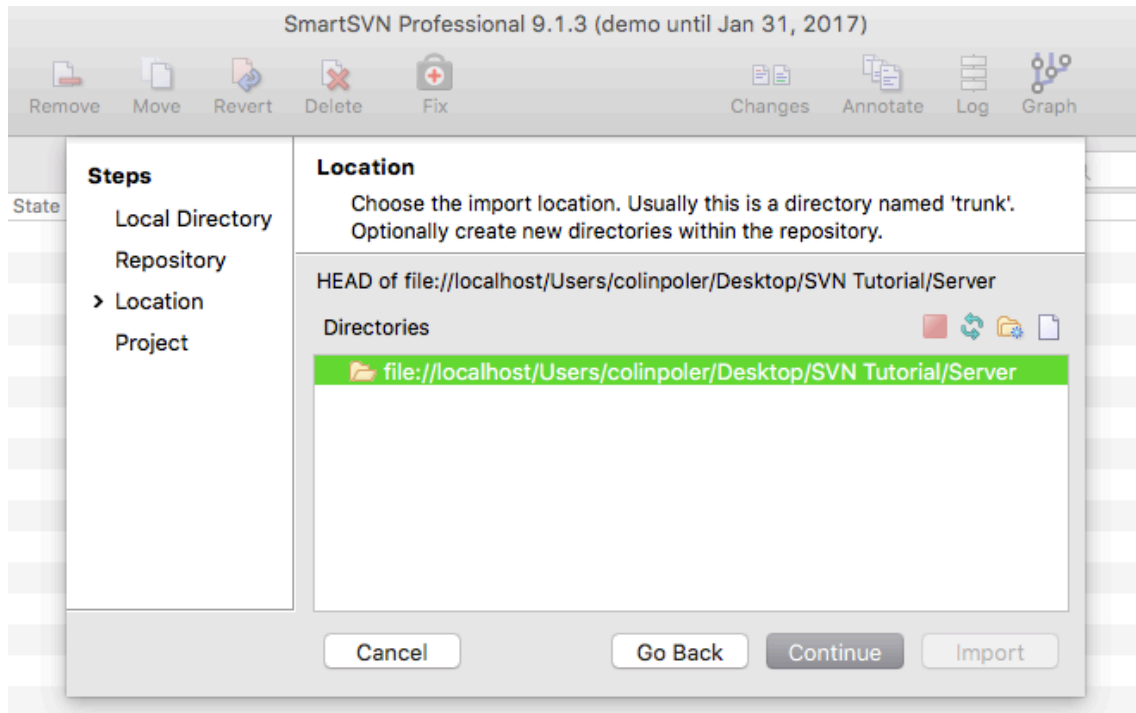
Setting up the local copy



1. Click the folder icon next to the text box
 - a. Navigate to the "SVN Tutorial" folder from before, make a new folder "Local", and click open
 - b. Click continue



2. Check the repository URL looks like the above, and click continue



3. Check the list looks like the above, and click continue
 - a. If it asks “Are you sure to select a directory not named ‘trunk’?”, just click continue
4. Leave the project import options as they are, and click import

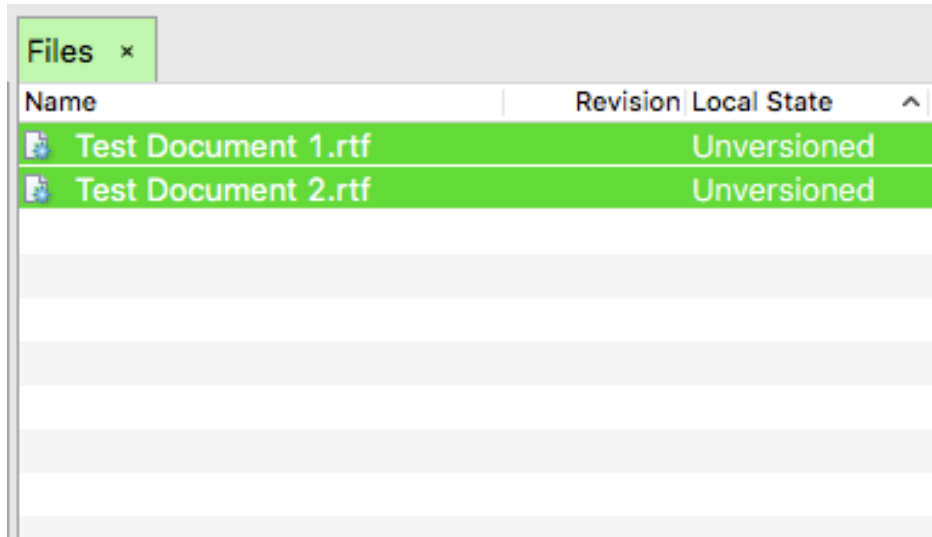
Committing changes

SVN works by keeping a master version of all the files on the server, and letting each user work on an independent local copy. When you are satisfied with the changes you’ve made, you’ll want to change the master version on the server. This is called “committing”.

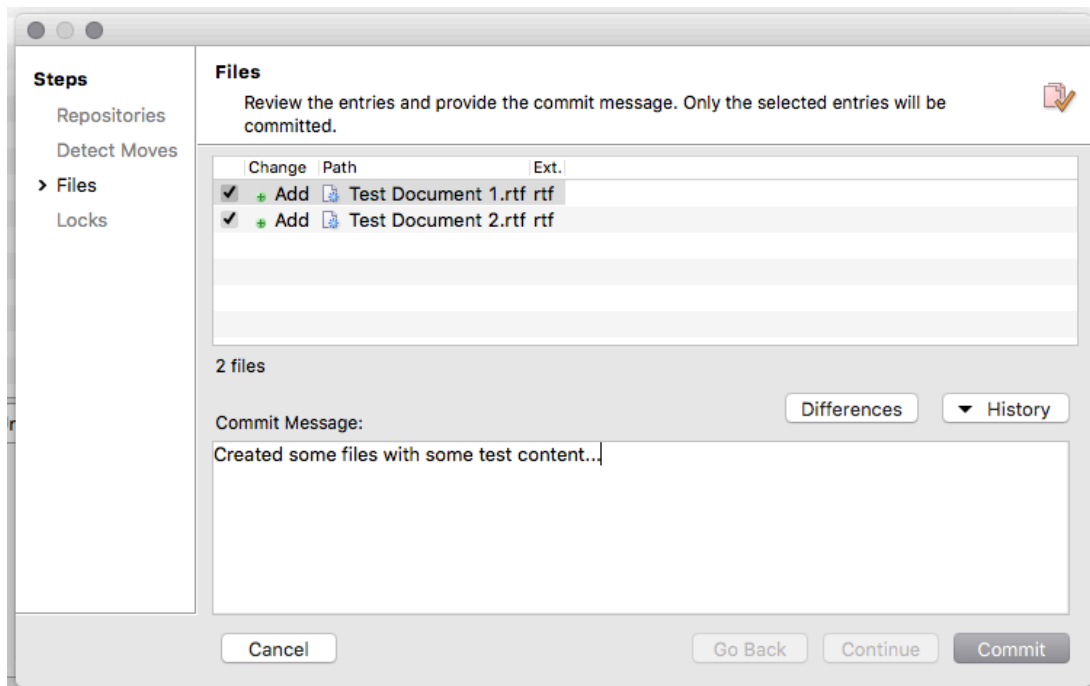
1. Open “TextEdit” (it’s installed on all Macs by default)
2. Make a new document
 - a. Type something, e.g. “This is my first change”
 - b. Save the document as “Test Document 1.rtf” in the “Local” folder we created above
3. Make another document
 - a. Type something, e.g. “Rocket Team is pretty cool”
 - b. Save the document as “Test Document 2.rtf” in the “Local” folder we created above
4. Back in SmartSVN, click the two icons highlighted below, so that icons 2,3,5,6 are selected as below
 - a. As an aside, this makes the file list show all files (modified or not) and also shows only files in the current folder (you can navigate folders in the left pane)



5. Select both documents in the main file list



6. Modify > Commit...



- a. Check off the boxes next to the files you want to commit.

This controls which changes are sent to the server. Say you've made lots of changes, but only want to send a few of them to the server (e.g. you've changed the nosecone,

and also the fin can, and you're only ready with the nosecone). Here, you can select just the files that you want to send to the server (e.g. just send the nosecone files).

- b. Type in a message describing your changes.

This message describes to other users what you did, so they can search for it later. For instance, if you change a tube length, you should say so, so that we can easily figure out when the tube length changed.

- c. Click commit

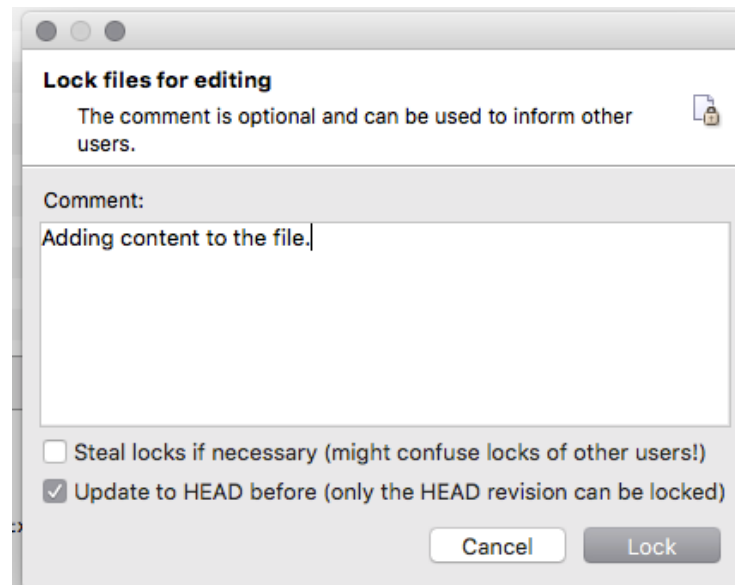
Challenge: make more changes to the files, and commit them to the repository.

Locking files

Say Alice busy working on a CAD file, and Bob starts to edit the same file. When Alice is done, she commits her file to the server. When Bob finishes later, he tries to commit the file, but SVN realizes he was working on an old version of the file. Since SVN can't intelligently combine the changes, SVN asks him whether he wants to cancel the commit, or overwrite Alice's changes.

How can we avoid wasting Bob's time making changes that can't be committed? Well, Alice can tell the server she's going to be editing the file in advance, so Bob knows. That's called "locking" the file.

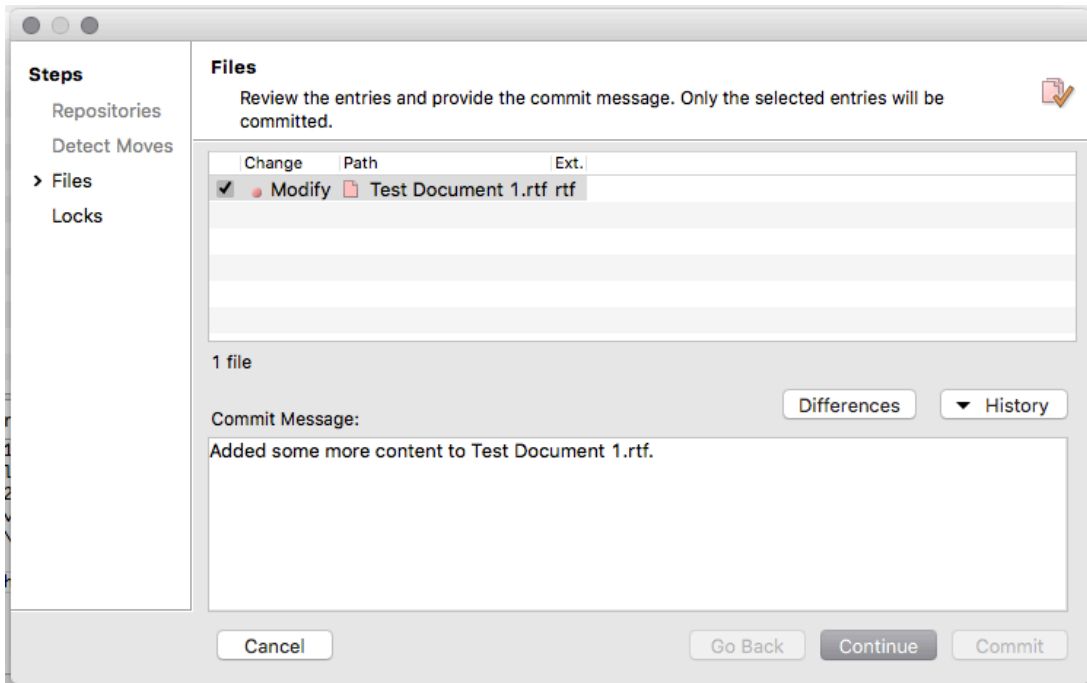
1. Select "Test Document 1.rtf", then Locks > Lock...



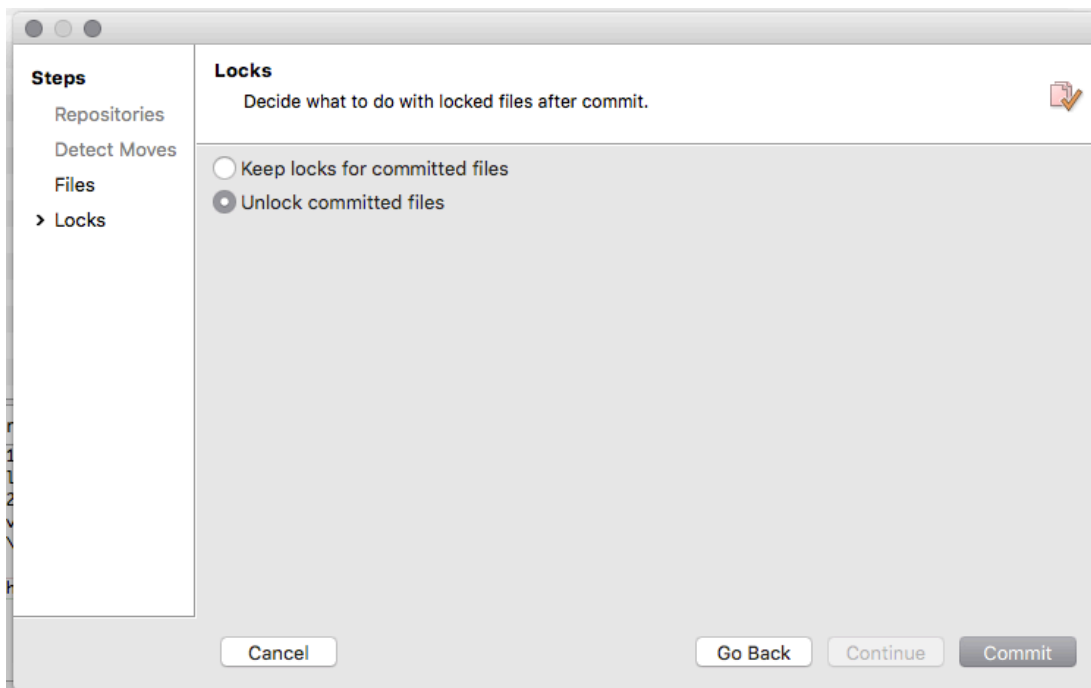
2. Type in a message describing why you have a lock.

Usually, it's sufficient to say you're editing CAD files.

3. Click lock
4. Open "Test Document 1.rtf"
5. Add some content to the document, and save it.
6. Back in SmartSVN, select "Test Document 1.rtf", and Modify > Commit



- a. Type a message for the commit, and click continue
7. Notice that you can either “Keep locks for committed files”, or “Unlock committed files”



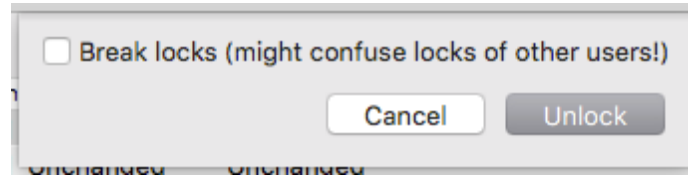
If you “unlock files”, SVN will release the locks on the files after you commit.

If you “keep locks”, SVN will keep the file locked for you.

- a. Click cancel. (Actually, we’re going to go unlock the files)

You might choose to unlock the files if someone else needs to edit the files urgently, and you're not done yet. Just be aware that you'll need to start over with the most recent version.

8. Select "Test Document 1.rtf" again, then Locks > Unlock...



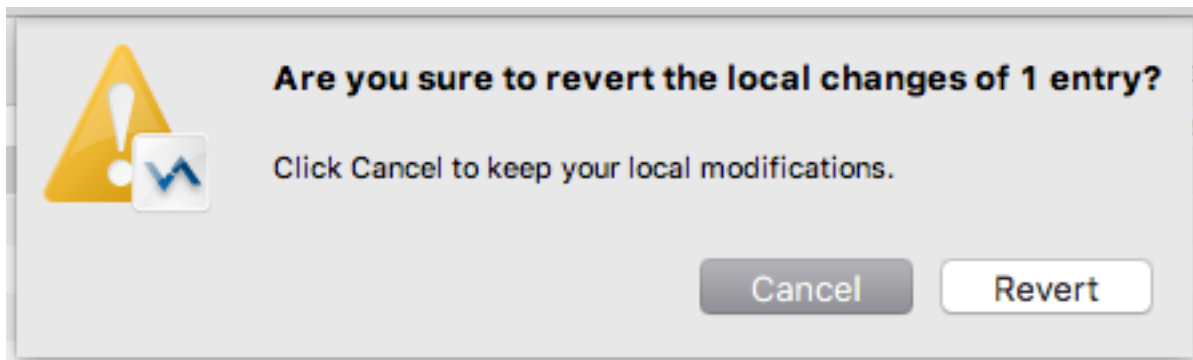
- a. Click unlock

Challenge: get a lock on "Test Document 2.rtf", make a change to it, and commit it to the repository *without* committing "Test Document 1.rtf". *If you commit "Test Document 1.rtf", make another change to it, so that we have a change to experiment with in the next section.*

Reverting changes

Reverting is useful when you were making a change, but you realize at some point that you've made a mistake. By reverting, you can reset your local copy of any file to whatever the server has, and just start over.

1. Select "Test Document 1.rtf" again, then Modify > Revert...



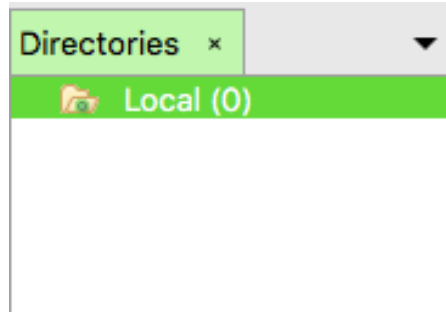
- a. Click revert
2. Try opening "Test Document 1.txt"; your change has disappeared!

Your change disappears because you never committed it, so the server gives you the most recent version that was committed.

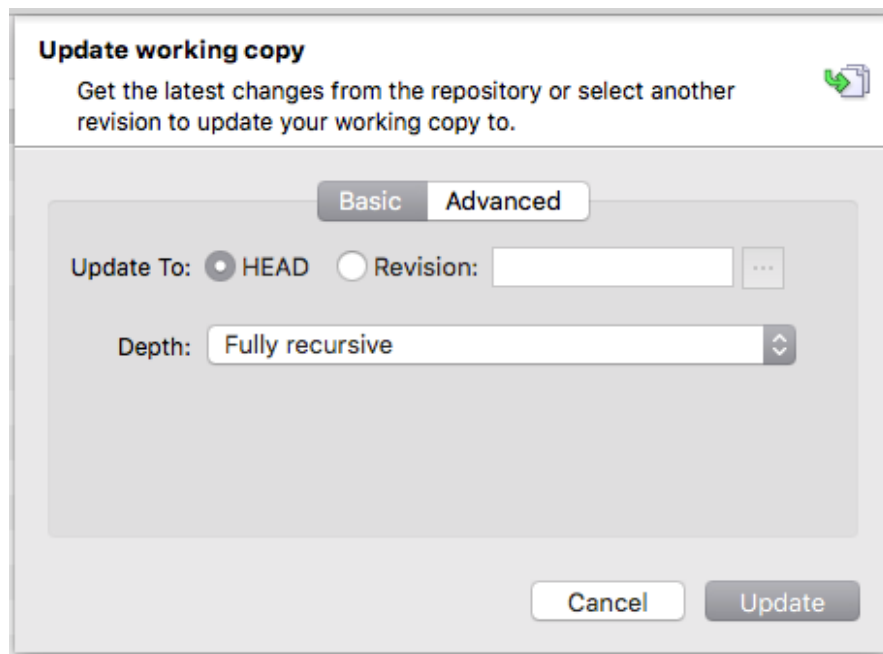
Challenge: Delete "Test Document 1.txt". Try reverting the deleted file. (Hint: try selecting the missing file, then Modify > Revert...)

Updating your local copy

You might update to see if any files have changed since your last update. You should update periodically to make sure you have the latest files, and you **really should** update before you make changes, so that you're working on the latest files.



1. Select the repository on the left, then Modify > Update...



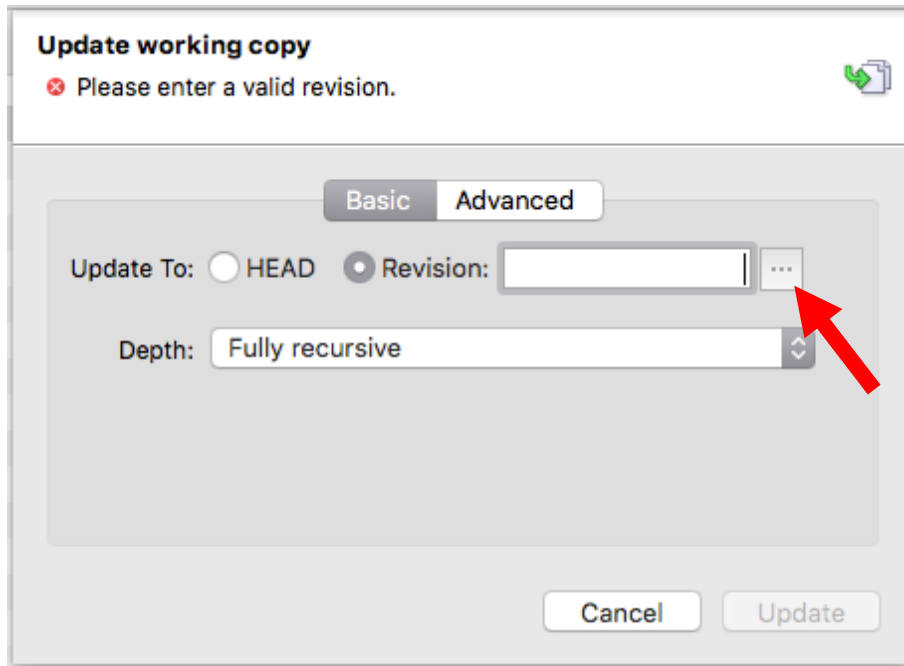
2. Check the settings match the above figure, and click update

Getting an old version

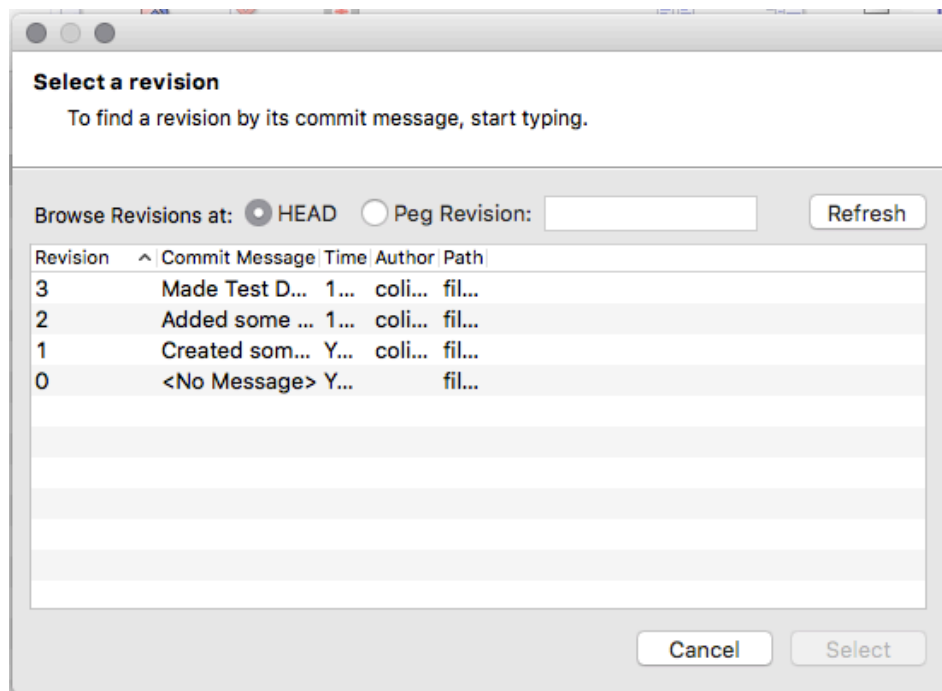
SVN keeps all historical versions of files, so you can get old revisions too!

You may also want to limit the number of files you sync, because Rocket Team SVN might take up a lot of space. Here's how to do that.

1. Select the repository on the left again, then Modify > Update...



2. Select "Revision:", then click the ellipsis marked above

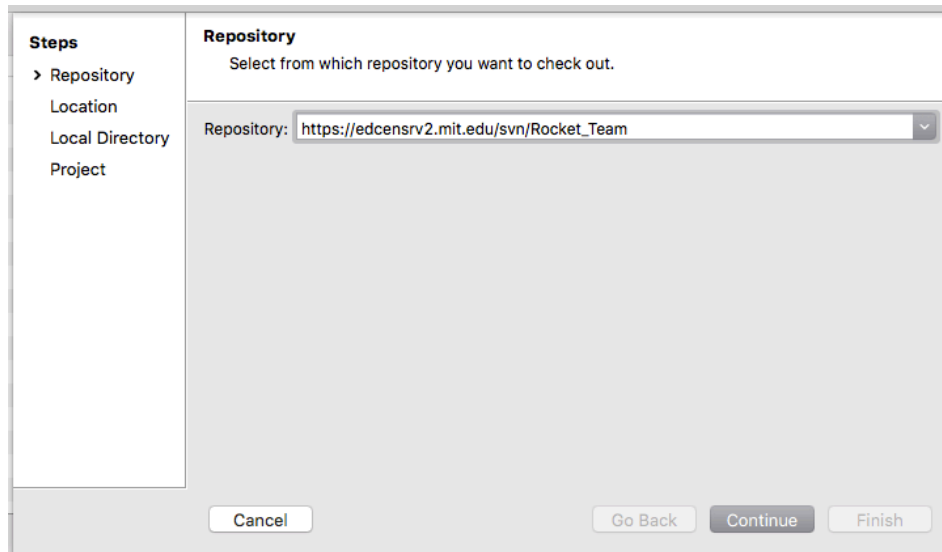


- a. Select a revision to travel back to (e.g. revision 1), and click select
3. Click update

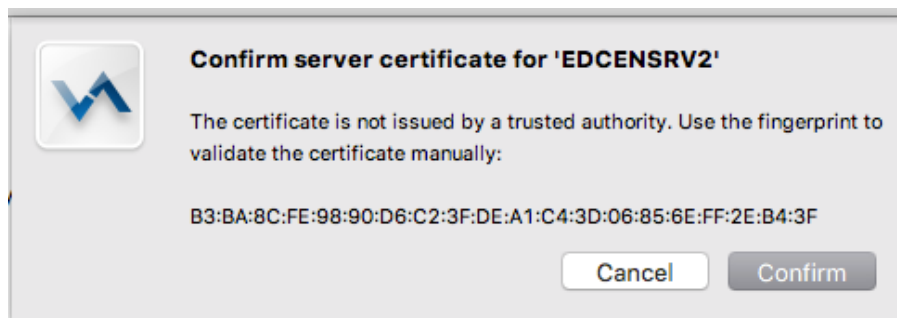
The other file isn't on your machine, but the server still has it. Also, next time you commit, SVN knows not to delete the server copy.

Connecting to the Rocket Team SVN

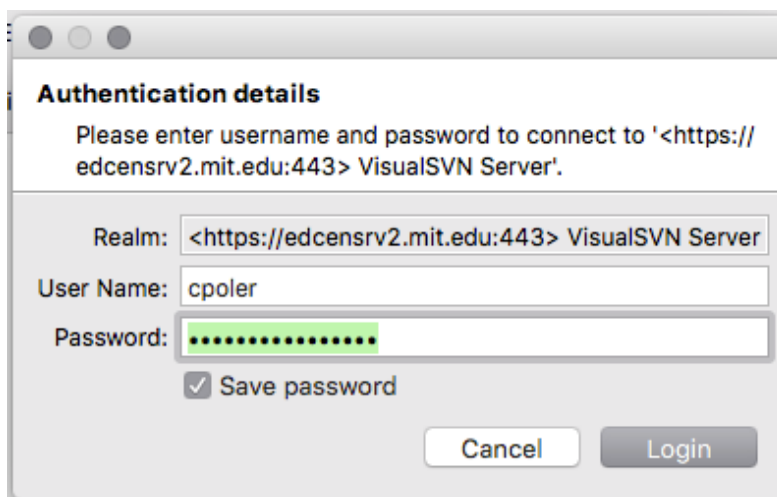
1. In SmartSVN, Project > Check out...



2. For the repository, enter "https://edcensrv2.mit.edu/svn/Rocket_Team", then click continue



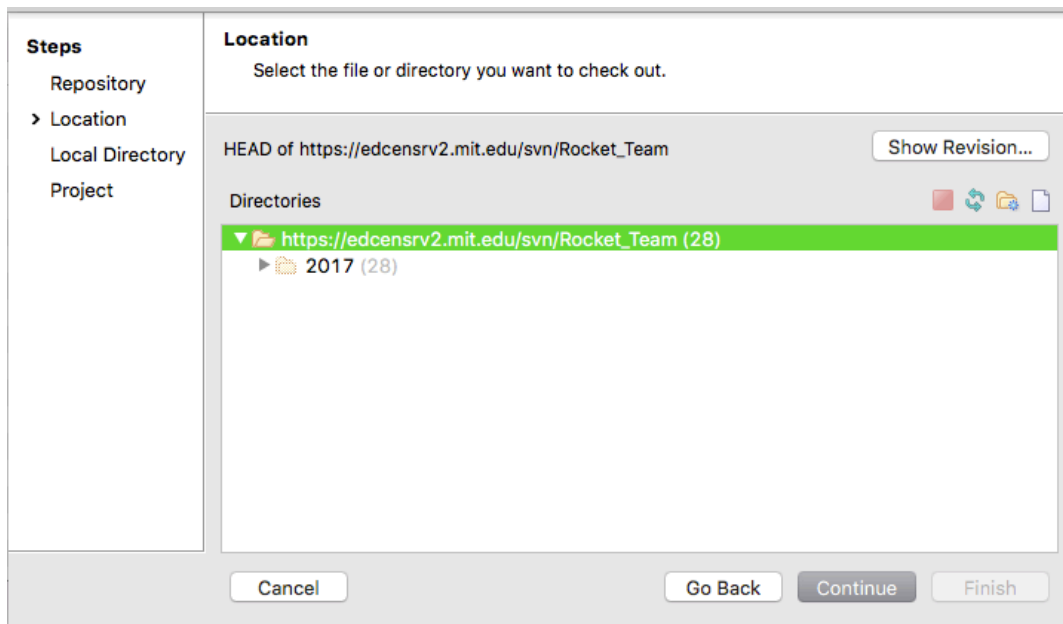
3. If it asks to "Confirm server certificate", click confirm. This appears because we didn't pay for a certificate authority to endorse our certificate.



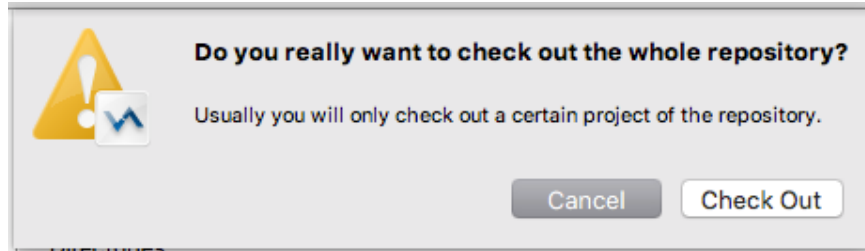
4. Type in the username and password that you'll be given, select "Save password", and click login



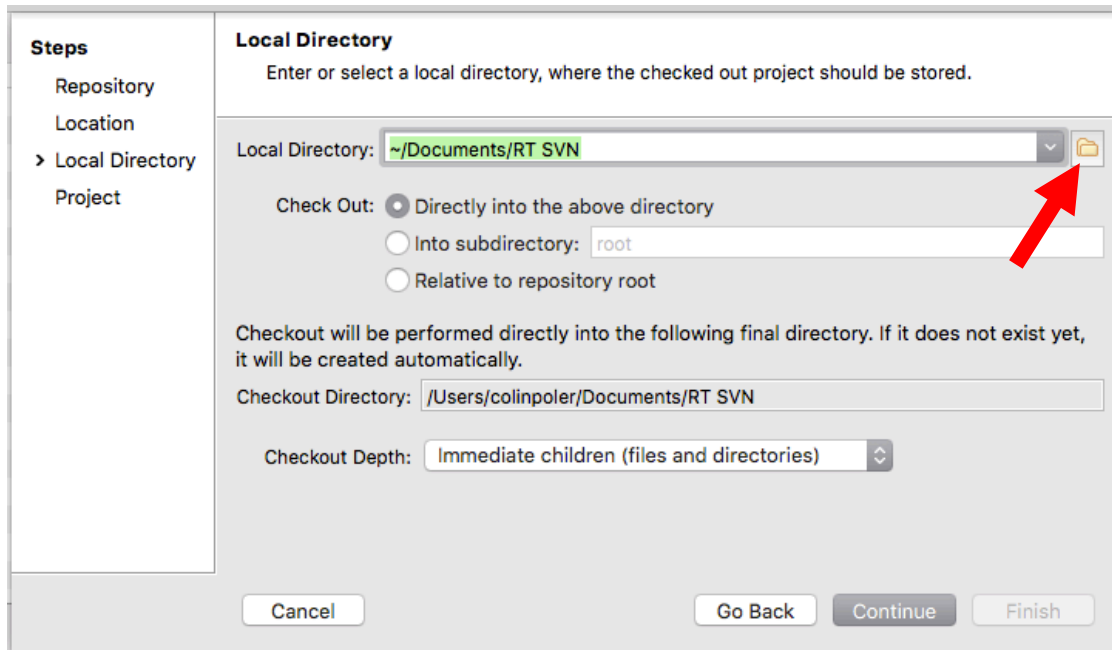
- a. If it asks to configure a master password, select "Don't use a master password", and click OK. If anyone steals your computer, you have bigger problems than the SVN server...



5. Make sure the full URL is selected in the location prompt, and click continue



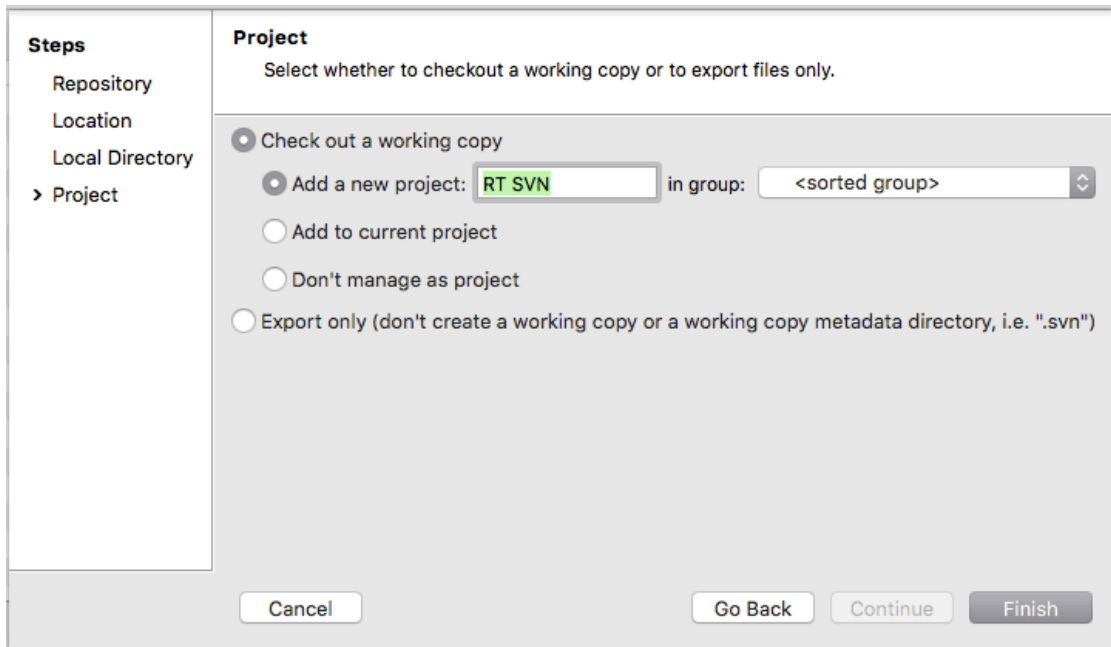
- a. If it asks you “are you sure?”, click “check out”



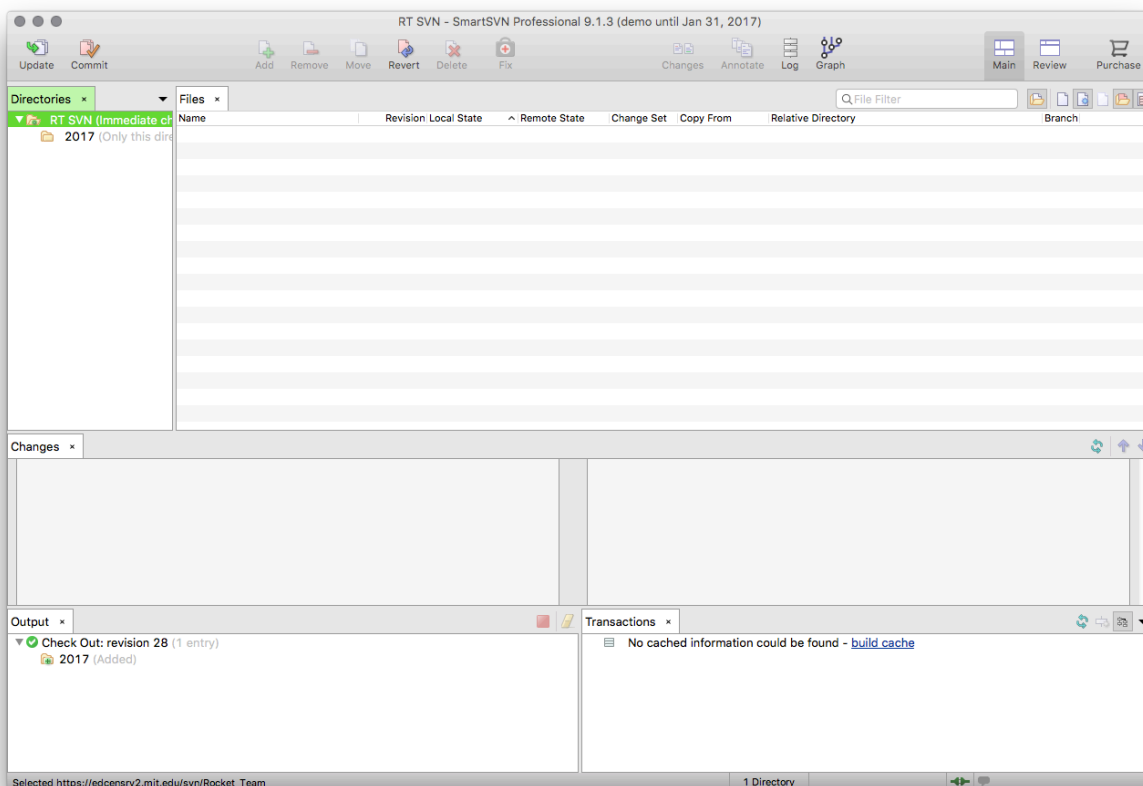
6. Click the folder icon next to the text box
 - a. Navigate to your documents folder, or wherever you’d like to keep RT stuff
 - b. Create a folder called “RT SVN”, and click open
7. Confirm that “Directly into the above directory is selected”



8. Change the Checkout Depth to “Immediate children”
9. Click continue



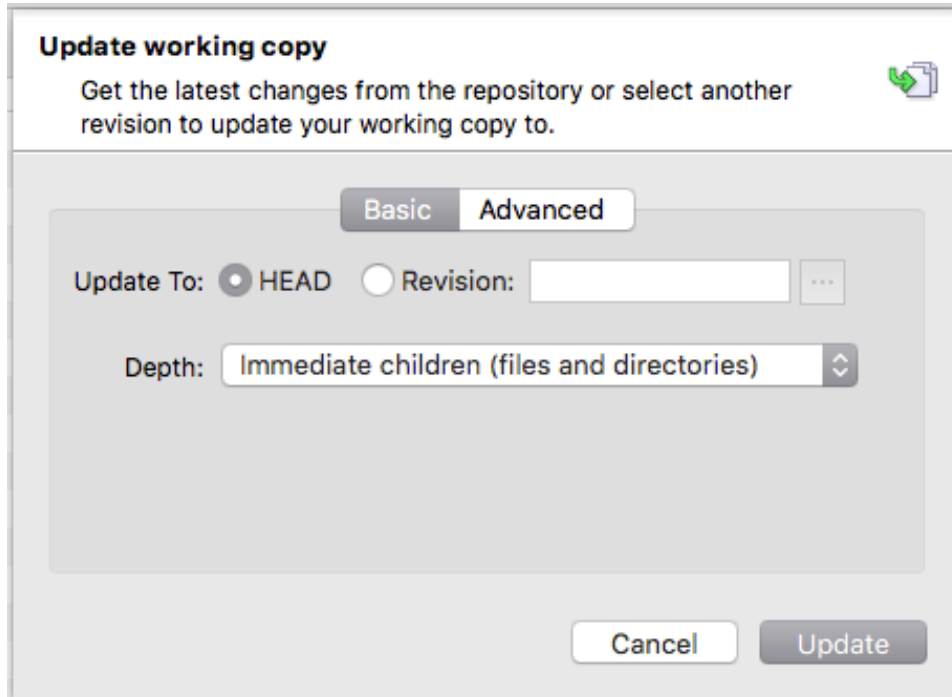
10. Make sure the settings match the above figure, and click finish



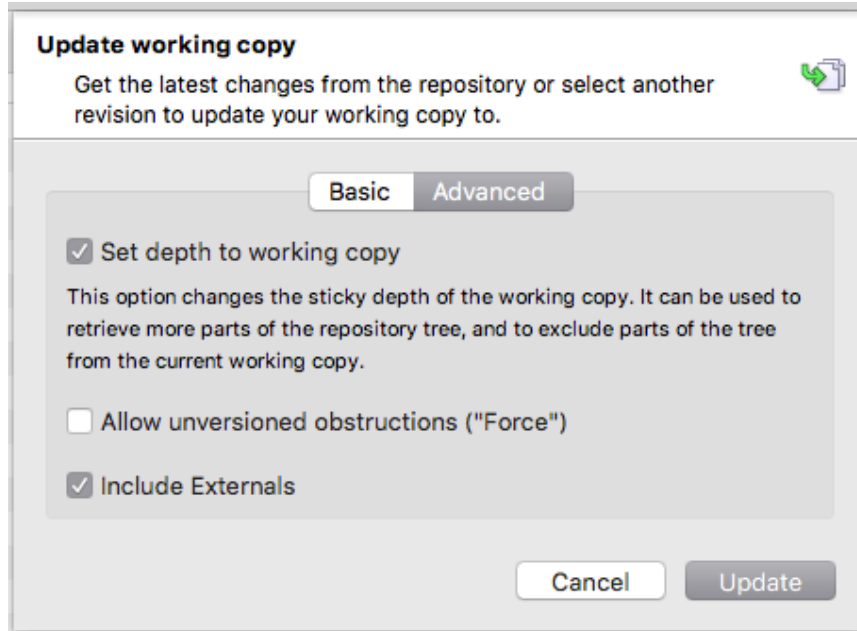
You should see the repository on your machine, but there's only a 2017 folder. Next, we'll sync the relevant files for you, and leave the rest out.



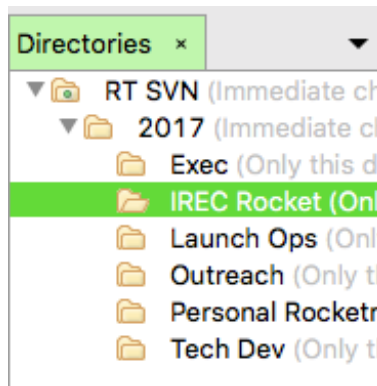
11. Select the 2017 folder in the navigator on the left, then Modify > Update...



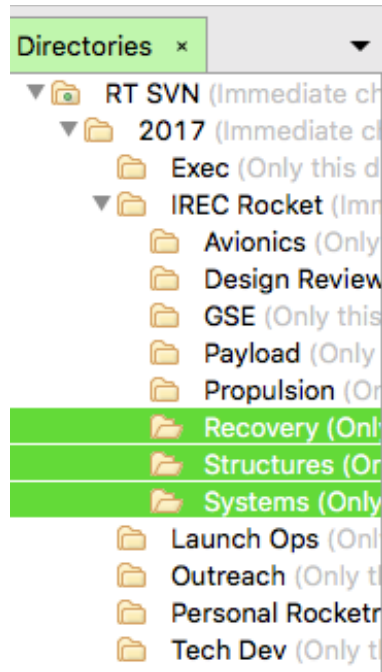
- a. Confirm the revision is HEAD
- b. Change the depth to "Immediate children"
- c. Click advanced, and then select "Set depth to working copy"



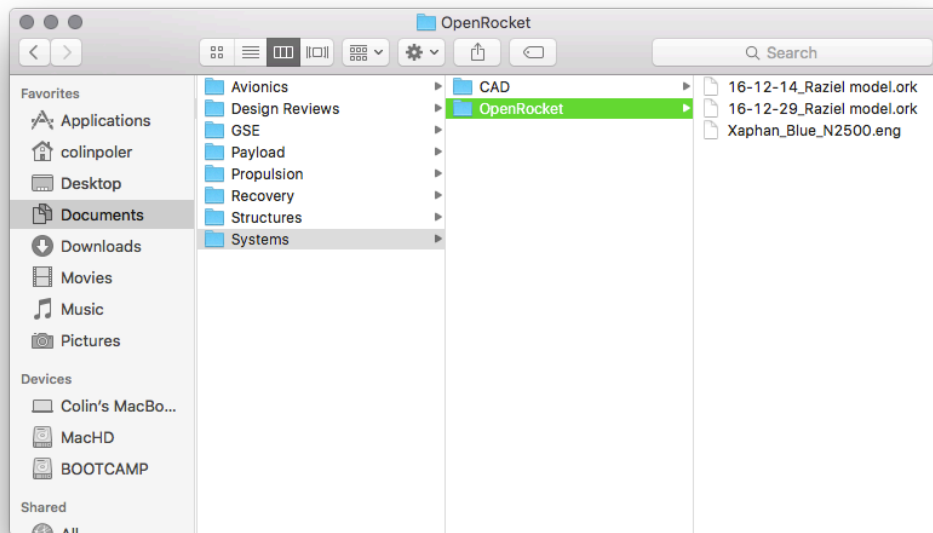
- d. Click update



12. Expand the 2017 folder, select the "IREC Rocket" folder in the navigator on the left, then Modify > Update... (we're going to check out immediate children, just as above)
 - a. Confirm the revision is HEAD
 - b. Change the depth to "Immediate children"
 - c. Click advanced, and then select "Set depth to working copy"
 - d. Click update
13. Expand the "IREC Rocket" folder
 - a. Select the relevant folders for you in the navigator on the left (you can use the command button to select multiple folders)
 - i. For example, if you help with Structures and Recovery, you should select Structures, Recovery **and** Systems (so you can see all the latest systems info)



- b. Then Modify > Update... (**this is not the same as above**)
- c. Confirm the revision is HEAD
- d. Change the depth to **“fully recursive”**
- e. Click advanced, and then select **“Set depth to working copy”**
- f. Click update



14. Make sure you can find all the files you need in the Finder
15. You're connected to the RT SVN server! Have fun rocketing!