

# 10 minutes SVN and ORCHIDEE

Developer's and user's meeting 13 Nov 2012  
Revised 12 June 2014

Josefine Ghattas

## Subversion (SVN) - a version control software

- Keep track of changes done over the time
- Backup and store all previous versions
- Centralize all existing developments done in ORCHIDEE
- Diffusion of public versions of ORCHIDEE (“tags and trunk”)
- Makes it easier to work in a group on the same version and exchange developments (“branches”) before inclusion in the main version
- Archive the work done by phd-students, post-doc, researchers,.. (stored in “perso” folder)

## Different versions of ORCHIDEE on SVN

*Base repository(depot) `svn://forge.ipsl.jussieu.fr/orchidee`*

- trunk      Standard version. Regularly updates with bug corrections and new developments  
*To be used with precaution. Not fully validated.*  
<https://forge.ipsl.jussieu.fr/orchidee/wiki/trunk>
- tag      A copy of the trunk for a specific revision.  
Validation done. Latest tag 1.9.6  
<https://forge.ipsl.jussieu.fr/orchidee/wiki/Tags>
- branches      Modifications for a specific development.  
A branch should start from a copy of the trunk
- peso      Folder for personal versions.  
Ask for help to initialize your folder.

# Login : 2 types of login

## **1- Login SVN**

SVN anonymous login

« sechiba » (passwd ipsl2000)

Only for extracting public versions of ORCHIDEE : trunk and tags

SVN personal login

« firstname.lastname »

To extract all versions where you have the permission

To be used to commit changes

## **2- Login “forge”**

Forge is a machine at IPSL where the orchidee project is technically managed using trac, wiki and svn.

A specific login at forge is needed to use web-interface for your personal folder and private branches.

Same login is also used to modify the wiki and to create tickets.

*Ask for login by sending a mail to [orchidee-help @ ipsl.jussieu.fr](mailto:orchidee-help@ipsl.jussieu.fr)*

## Basic use of SVN

**svn co** *repository* : Extract a directory and it's sub-directories.  
Add « -r *rev* » for a specific revision.

Exemple : Extract latest revision of tag 1.9.6 :

```
> svn co svn://forge.ipsl.jussieu.fr/orchidee/tags/ORCHIDEE_1_9_6/ORCHIDEE MYORCH
```

Exemple : Extract revision 800 of trunk :

```
> svn co -r 800 svn://forge.ipsl.jussieu.fr/orchidee/trunk/ORCHIDEE MYORCH
```

### **Extract with modipsl**

**For ORCHIDEE the extraction is done using modipsl. You do not need to do “svn co ...” as it is embedded in the scripts.**

The script « **model** » in modipsl extracts ORCHIDEE and all tools needed for a specific configuration. Example :

```
> svn co http://forge.ipsl.jussieu.fr/igcmg/svn/modipsl/trunk modipsl
> cd modipsl/util
> ./model ORCHIDEE_trunk
```

The model will now be installed in modipsl/modeles/ORCHIDEE.

# Basic use of SVN

**svn info** : Information will be printed on the screen about extracted version

Example :

```
> cd modipsl/modeles/ORCHIDEE  
> svn info
```

```
Chemin : .  
URL : svn://forge.ipsl.jussieu.fr/orchidee/tags/ORCHIDEE_1_9_6/ORCHIDEE  
Racine du dépôt : svn://forge.ipsl.jussieu.fr/orchidee  
UUID du dépôt : f489ceea-5127-0410-b15c-c4a6149ed9a7  
Révision : 881  
Type de nœud : répertoire  
Tâche programmée : normale  
Auteur de la dernière modification : didier.solyga  
Révision de la dernière modification : 880  
Date de la dernière modification: 2012-05-09 16:08:00 +0200 (mer. 09 mai 2012)
```

In this example the version of ORHCIDEE is tags/ORCHIDEE\_1\_9\_6 and the revision is 881. You can also see that no changes for this subdirectory are done since revision 880 which is the latest modified revision.

# Basic use of SVN

**svn stat** : To know which files have been modified compared to extracted version

```
> svn stat
?      Makefile
?      src_driver/Makefile
?      src_parallel/Makefile
?      src_stomate/Makefile
?      src_sechiba/Makefile
M      src_sechiba/intersurf.f90
?      src_global/Makefile
?      src_parameters/Makefile
```

**svn -u stat** : Compared to latest version on the server

```
> svn -u stat
?      Makefile
?      src_sechiba/Makefile
M      src_sechiba/intersurf.f90
*      src_sechiba/routing.f90
M      * src_sechiba/enerbil.f90
```

```
> svn help stat
'A' Added
'C' Conflicted
'D' Deleted
'M' Modified
'?' item is not under version control
'!' item is missing
* a newer revision exists on the server
```

# Basic use of SVN

**svn diff** : Show difference compare to extracted version

Example :

```
> svn diff
```

```
Index: src_sechiba/intersurf.f90
```

```
=====
--- src_sechiba/intersurf.f90 (revision 1054)
+++ src_sechiba/intersurf.f90 (working copy)
@@ -257,6 +257,7 @@
     itau_sechiba = kjit + itau_offset
     !
-    CALL intsurf_time( itau_sechiba, date0_shifted, xrdt )
+    CALL intsurf_time( itau_sechiba, date0_shifted, xrdt, toto )
+    WRITE(numout,*) 'toto'
     !
     ! 1. gather input fields from kindex array
```

Lines starting with “+” are added in the local version (also called working copy).  
Lines starting with “-” are removed. In this example, the line “CALL intsurf....” has been modified and the line “WRITE(...” has been added.



# Basic use of SVN

## **svn diff**

Difference between working copy (local version) and the version that was extracted. If changes are done on the repository after extraction, they will not be taken into account

## **svn diff -r HEAD**

Difference between the working copy and the latest revision on the branch you extracted.

## **svn diff -r x1**

Difference between working copy and revision x1

## **svn diff -r x1:x2**

Difference between revision x1 and revision x2

## Basic use of SVN

### ***svn revert one\_or\_several\_files***

Get back to the version of the file on the server, without your changes.

For example :

```
> svn revert src_sechiba/intersurf.f90
```

# Basic use of SVN

**svn update** : Update working copy with the latest revision on the server

- Updates only with changes on the same branch (the directory and it's sub-directories)
- Local changes will be kept. Conflicts can occur if the same file is modified locally and on the server
- Changes are done only in the local working directory

Example :

If you extracted a tag or a branch, changes done on the trunk will not be added in your directory.

If there is a conflict on a file, type p for postpone. svn will then save your modifications in a separate file. The file without modifications is also saved in your directory.

## Commit to svn

- svn add** newfile.f90      Put files and/or directories under version control.  
They will be added in next commit
- svn rm** file.f90      The file will be removed locally and the file is scheduled to  
be removed from the svn repository in next commit.
- svn commit**  
(or svn ci)      Commit all changes in the directory to the server  
The revision number is increased. This command should be  
done from directory modipsl/modeles/ORCHIDEE

### **Best practice for commit**

- Add a log message to each commit
  - Do whole ORCHIDEE source directory in each commit, avoid to commit file by file
  - If you work on a branch, discuss with the other people before commit
  - If you work on a branch, update your files regularly
- For commit on the trunk ORCHIDEE, see also :  
<https://forge.ipsl.jussieu.fr/orchidee/wiki/trunk/CommitOnTrunk>



# Web-interface of the ORCHIDEE svn server

<https://forge.ipsl.jussieu.fr/orchidee/browser>

root

Name ▲	Size	Rev	Age	Last Change
▶ <a href="#">branches</a>		1054	4 days	camille.risi: Added Camille's version including Isabelles modifications. Not yet ...
▶ <a href="#">perso</a>		1050	13 days	abdoul-khadre.traore: correction of lhour type (real instead of integer)
▶ <a href="#">tags</a>		943	4 months	didier.solyga: Bug fix : forget to inverse endif and enddo in my last commit.
▶ <a href="#">trunk</a>		1043	2 weeks	joefine.ghattas: Gathered all tools not related to libIGCM in TOOLS.

Note: See [TracBrowser](#) for help on using the browser.

Powered by Trac 1.7  
By Edgewall Software

Visit the Trac open source project at <http://trac.edgewall.org/>

Click on the directory to visualize

# Web-interface of the ORCHIDEE svn server

<https://forge.ipsl.jussieu.fr/orchidee/browser>

Sciences de l'environnement Institut Pierre Simon Laplace

**Orchidée**

Login to see also non private directories

Search

Login Help/Guide About Trac Preferences

Wiki Timeline Roadmap **Browse Source** View Tickets Search

Last Change Revision Log Revtree

root / tags / **ORCHIDEE\_1\_9\_6** / ORCHIDEE

Visit:  View revision:

Name	Size	Rev	Age	Last Change
..				
arch		8	2 years	orchidee: import first tag equivalent to CVS orchidee_1_9_5 + OOL_1_9_5
src_global		861	6 months	nicolas.vuichard: correct solarang and time_zone functions for calculation of hour in case ...
src_parallel		720	9 months	didier.solyga: Add svn headers for all modules. Improve documentation of the parameters. ...
src_parameters		875	6 months	didier.solyga: Change default values for PFT_TO_MTC array if NVM=13 so we have the ...
src_sechiba		846	6 months	didier.solyga: Formatted labels so a script can automatically generate the ...
src_stomate		943	4 months	didier.solyga: Bug fix : forget to inverse endif and enddo in my last commit.
AA_make	0.7 KB	41	23 months	mmaipsi: MM, MasaK : Group all definitions of R_Earth in the whole ORCHIDEE code : ...
AA_make.ldef	82 bytes	12	2 years	mmaipsi: correct Id, HeadURL, Date, Author and Revision svn properties.
Doxyfile_ORCHIDEE	9.1 KB	8	2 years	orchidee: import first tag equivalent to CVS orchidee_1_9_5 + OOL_1_9_5
makeorchidee_fcm	5.2 KB	8	2 years	orchidee: import first tag equivalent to CVS orchidee_1_9_5 + OOL_1_9_5
ORCHIDEE_CeCILL.LIC	2.1 KB	8	2 years	orchidee: import first tag equivalent to CVS orchidee_1_9_5 + OOL_1_9_5

Note: See [TracBrowser](#) for help on using the browser.

View changes...

Download in other formats:  
Zip Archive

Powered by Trac 0.11.7  
By Edgewall Software.

Visit the Trac open source project at  
<http://trac.edgewall.org/>

Click to compare 2 directories

Click to show modifications done in this directory or file