Mo.net
Mo.net Source Control

January 2022
Revision 13

Background

At its simplest, source control is a version control system used to manage and track changes in source code and associated files during the development of a piece of software.

Source control systems also allow individual users to maintain a history of changes made to the files in a software project, and to recall and revert to any previous version of a file. Such systems also facilitate collaborative working across distributed teams by avoiding / managing conflicts when two people are working on the same file or set of files concurrently.

Mo.net's source control functionality is designed to bring such benefits to the financial modelling community.

The Problem

As financial models evolve and grow in size and complexity in response to the latest regulatory demands and business needs, managing model changes and providing accurate records to satisfy audit requirements becomes more difficult.

In addition, as multiple users need to access and change the same core business models at the same time, it's easy to understand how model development can quickly become chaotic and disorganised. This in turn can result in source code conflict, model inconsistencies, and potentially model errors, as well as the significant effort required to resolve any issues.

The Opportunity

Considering the existing development and support requirements of complex financial models and the shortcomings of other solutions, an appropriate source control system might consist of the following features:

- An out-of-the box solution requiring minimal setup and configuration.
- Seamless integration with the financial modelling solution software, such that when you make a change to a model, a new version is created via the existing interface, and the full development history of the model is recorded, without having to launch a separate tool.

- The ability for each user to share their own changes to a central repository, and retrieve and review changes made by other users.
- The ability to revert easily to a previous version of a model, result or a run.
- A two-tier pricing structure, consisting of full functionality for a multi-user environment, and restricted functionality for single users who do not require the collaborative features of the full source control system.
- All changes to be fully tracked and auditable, providing enhanced security and governance.

Mo.net source control functionality offers all of these features.

Introducing Mo.net Source Control

Mo.net Model Development Studio contains built-in source control functionality which enables you to track all stages of model development and recreate any stage at the click of a button, and to compare audit logs for the different versions of a model. For lone developers, this functionality is free to use without an additional software license.

To realise the full collaborative potential of Mo.net source control, a separately-licensed server component – the Mo.net Team Collaboration Service - must be installed. This enables multiple users to work simultaneously on a single Mo.net project and share their changes with each other.

How Does It Work?

The figure below illustrates how Mo.net source control works, from both an individual developer's perspective and from a team / collaboration perspective.

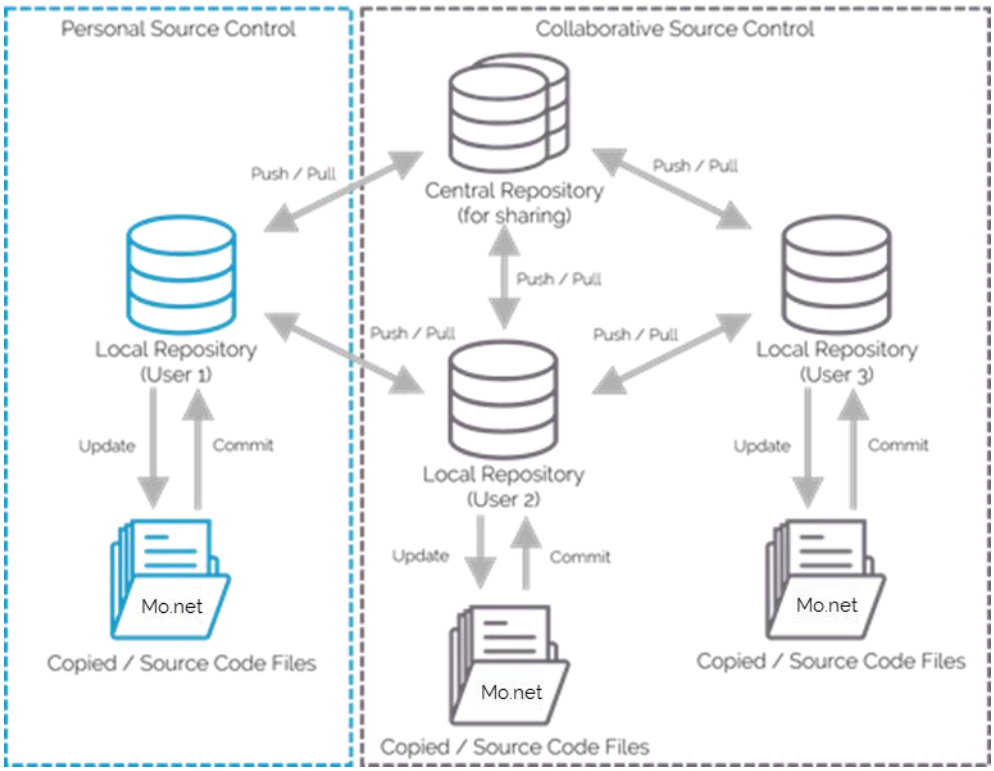

Figure 1 - Overview of Mo.net Source Control

Personal Source Control for Individual Developers

When you have made a change to a project, you take a 'snapshot' of the project. This records the state of the project on your local machine at the time the snapshot is taken.

A history of these snapshots is stored in a repository on your local machine, and through this local repository, you can access previous versions of this project.

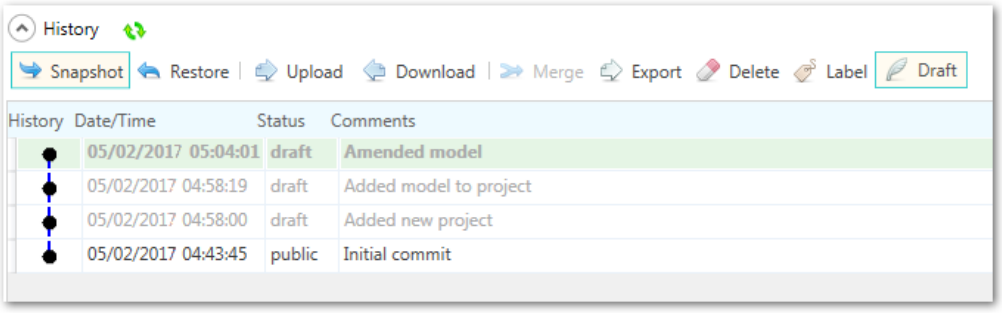

Figure 2 - Taking a project snapshot

Collaborative Source Control for Development Teams

You can share changes they have made to a project with other users by uploading (pushing) changes from your local repository to a central repository.

Similarly, you can retrieve (pull or fetch) details of changes made by other users by downloading files from the central repository to your local repository. Changes made by other users can then be merged into your version of the project.

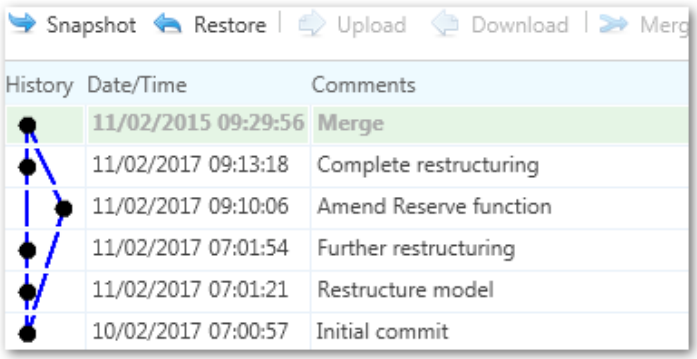

Figure 3 - Reviewing project changes

Benefits

Model developers and businesses will quickly realise the technical and operational benefits of Mo.net Source Control. The system provides:

- A full audit trail of all changes to model development to satisfy audit and regulatory requirements, such as Solvency II Pillar 2.
- An efficient way to share model code with an extended community of developers / interested parties – such as internal audit, release management or IT.
- An intuitive way to work collaboratively. You can make changes to a local copy of a project independently of changes made by other users, and then merge your changes with theirs and store the merged project in a central location.
- Seamless integration with the user interface of the Mo.net Model Development Studio: when you make a change to a model, a new version is created and the full development history of the model is recorded.
- A single version history view and a simple method of reproducing models, results and runs, allowing you to revert easily to a previous version.
- Conflict resolution to manage competing changes in a model.
- A two-tier pricing structure, consisting of full functionality for a multi-user environment, and a simple out-of-the-box solution requiring minimal setup, for individual users who do not require the collaborative features of the full source control system.

Contact Us

For more information regarding Mo.net Source Control or to discuss your specific source control requirements, please contact us:

Software Alliance Limited
30 Stamford Street, London, SE1 9LQ
Tel: +44 (0) 20 3964 2755
www.softwarealliance.net
hello@softwarealliance.net