

# R<sup>3</sup>S Development Manager

Providing an intuitive way to work collaboratively.





Allows teams to collaborate  
on a shared codebase easily





# R<sup>3</sup>S Development Manager

In a collaborative environment, it is common for several developers to share and work on the same model code. While some developers will be fixing bugs, others will be implementing new features. With so much going on, there needs to be a system in place for managing and modifying different versions of the same code base.

As software projects grow in lines of code and contributor head count, the costs of communication overhead and management complexity grow exponentially. An application tool is critical to alleviate the organizational strain of growing development costs.

# Overview

R<sup>3</sup>S Development Manager is a client-server application enabling a multi-user development environment for R<sup>3</sup>S Modeler providing version control of model code in a central repository on a server. Model developers can upload the contents of a user workspace onto the server to create a library. Rather than developing models in a user workspace, users create their own sandbox workspace that links to the server. As multiple users can each create their own sandbox, this enables all those users to develop or modify models simultaneously from the same library. An administrator sets the permissions for each user, restricting what a user has access to and the parts of the code base in a library each user can modify.





# Linking to a server

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R<sup>3</sup>S Development Manager is installed on a server and users are granted login credentials to allow them to connect to it. User accounts can be either local Development Manager accounts or Development Manager can be integrated with Active Directory. After making a set of changes in their sandbox, a user checks in their changes making them available for other users. The R<sup>3</sup>S Development Manager server maintains a history of the sets of code changes, called a changeset, checked into a library and the code changes within each changeset. This allows a user to create a snapshot of the code base at any point in time and to be able to review, build and run R<sup>3</sup>S models as they were at that point in time.

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Flexible and customizable permissions allowing the appropriate balance of collaboration and control.



Maintain the entire history of  
code changes



## Libraries

On the server a library will be created together with its initial branch and the branch's opening changeset.

A new branch can be created from any changeset, allowing access to a previous code base that excludes any developments that have been implemented after this code base. This means you can return the code base to a previous point in time and then perform analysis on how changes would impact results without having to revert any subsequent changes.

## Sandboxes

With R<sup>3</sup>S Development Manager models are developed in a sandbox workspace rather than a user workspace. The sandbox is associated with a branch of a library. On creating a sandbox, it is populated with the code from the latest changeset for that branch. The server copy of the sandbox exists as a backup so that if the local copy is deleted the changes to models will still exist.

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Providing an end-to-end audit  
from model development  
through to model output.



## Full access control over workspaces

Users can create their own local sandbox for the changes they are required to make. Once the required changes are complete, the changes in the sandbox can be checked in, making them available for other sandboxes linked to the same library. All other users can resynchronize their sandboxes to ensure that they have the latest changes that have been checked into the library.

## R<sup>3</sup>S Process Manager

R<sup>3</sup>S Process Manager is a server application designed for running models in a production environment including the scheduling of models to run at regular intervals once their data and assumptions are available.

Models stored in R<sup>3</sup>S Development Manager can be uploaded into R<sup>3</sup>S Process Manager with a unique identifier enabling a complete audit trail from the model in production back to the changeset containing the full code base for that model.





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