

Manual: 4.7. Fine-Tune Your Model

After you have built a model and it is essentially sound on the basis of the tag settings, plausibility check and the model report, it is time to perform model fine-tuning. This is a process that may take some time and involves looking at many individual suggestions but will eventually make the model ready to be used in practical work and will also provide the confidence to use the model.

In the APO menu, please choose the option of fine tuning. To first begin fine tuning for a plant, please click on the button [Initialize](#). This will select 100 randomly chosen historical suggestions for your review. These will then be listed in the fine tuning overview. You can restrict the list by using the form and clicking the button [Filter](#). Filtering may be done by either the time of the suggestion or whether this suggestion is marked ok or not ok. Initially, of course, all suggestions are marked not ok.

Please now look through each suggestion carefully. Note that this suggestion was made a particular time in the past in response to a very particular state of the plant and its environment. In your assessment of the suggestion, please recall this situation. The questions to ask with each suggestion are

1. Could all the listed changes have been implemented at all?
2. Are there any reasons for not implementing any of the changes?
3. What settings in the model need to be changed in order to prevent unrealistic changes from being suggested?

If the suggestion is realistic the way it is, please mark it ok. If it is not ok, you can use the comment function to leave a comment for later record keeping as to what was not ok, why and what should be done.

A suggestion is fairly self-explanatory. Please note that each suggestion only suggests to move the plant into a condition that it has already experienced at least once in the known history. This previous experience occurred at a time that is labeled "Prior at" in the table. If you click on this timestamp, a comparison page will appear giving you the details of the current and this historical point so that you may compare them. This is useful for understanding what the model sees as a comparable condition and thus perhaps making modifications to the model or simply understanding where the suggestion comes from.

When you have checked through all the suggestions and collected a number of alterations to be made to the model, please actually make these alterations and retrain the model using the option of full recomputation. This will recompute all suggestions. Then go back to the fine tuning overview and now click on the button [Update](#). This will now get the new suggestion for all the specially selected fine tuning suggestions you have already looked at.

Look through all the suggestions a second time. The ones marked ok, should still be ok. The ones marked not ok, could now have improved. If they are ok now, please mark them ok. This process should repeat until all suggestions in the fine-tuning overview are marked ok. At this point the model has been adjusted for a significant and representative sample of historical suggestions to be practical and good.

You can review your work done by clicking on [Overview](#) that will supply you with a quick count of the number of suggestions marked ok during every iteration of this process. You can also click on [Report](#) to get a full (and lengthy) report on the evolution of every suggestion and all your comments.

At the end of fine tuning, the model is ready to be used in real plant operations. We recommend using the model for a few days in probationary capacity just in case some feature only becomes apparent in current operations.