

Manual: 4.6. Understand the Model Report

After you have trained the model, you can have APO generate a model report. This is either the last step in the APO wizard or you can get to it via the APO menu choosing the report option. The report generator asks for a time period and a granularity of the report. By default, the time period is set to the entire time period for which data is in the database. The report will be compiled for that time period and statistics will be collected with the frequency specified by the granularity.

The report itself contains an explanation of its data tables and diagrams. The report is mainly concerned with analyzing the optimization potential provided by APO. Every suggestion provides an opportunity to improve the plant's performance. If that suggestion is implemented, then that opportunity is realized as a actual gain. These opportunities and realized gains are summarized in the report. Please check that the magnitude of improvement is realistic. If the improvement is very large, the model may not know about all the restrictions or boundary conditions that the process has. If the improvement is very small, perhaps the restrictions on the model are tighter than they are in reality. A more detailed analysis of the suggestions themselves follows in the process of fine-tuning but an assessment of the rough numerical size of improvement should be done now using the report.

The report will also contain a list of the most common suggestions made. A single suggestion may contain several lines of changes to be made. Each of these changes is averaged out here and sorted according to how often they appear. You will see how often tags are changed and by what average amount they are changed. This average is supplied with a standard deviation so that you can see how much variation about this average takes place. Tags that appear in nearly every suggestion probably have an uncertainty that is too small and thus make nearly every value sub-optimal. Tags that appear in hardly any suggestion may not have a great influence on the process and perhaps should be ignored. On the other hand, they may have an uncertainty that is too great as to hide the true influence they may have. If the changes are often very large, perhaps there are limiting factors that must be imposed on the model.