

Visu: Performance FAQ: limiting number of Visu-Elements or Objekts

The following is a list of questions on visualization topics in relation to the general performance viewpoints.

Especially those related to the maximum number of visualizations, visual elements, displayable elements and objects in relation to the system performance.

- **Critical programming practices for visualization performance**
- **Number of frame objects used in a project**
- **Number of all objects displayed at the same time**
- **Number of objects shown on a single visualization screen (even if elements are hidden)**
- **Number of variables used within one or more Visu frame elements**
- **Number of inputs for visualization frames**

General problem description of the factual situation

The mere number of "only" Visu Elements (or used frames, etc.) does not allow a correct statement concerning performance.

That is because the performance depends on many more factors than the sheer number of shown objects. For example:

- The performance of the PLC, and hence the remaining performance besides the IEC tasks.
- The used kind of the Visu Elements:
 - e. g. using 10000 static rectangles in comparison to 150 tables in a visualization, which update themselves constantly is a huge difference on the performance, and cannot be compared.
- The computational effort for the system due to used 'images':
 - Is scaling for images or Visu Elements need?
 - Is there transparency active for some object?
- The available memory capacity (for visualization files, as for example bitmaps).
- the complexity of the visualization:
 - for example, the number of the objects, interlocking visualizations ('Frame in Frame' visualizations), complicate elements, etc.

Unfortunately, this topic does not allow a more specific statement to be generalized.



The above points can serve as a guide to what to consider when implementing a larger and more complex visualization to prevent problems in advance.



Our experience has shown that serious drops in performance can only be expected from a considerable visualization size and scope in the project.
Projects in the size of a building or industrial plant visualization should in most cases not be affected.

-
- [Setting the update time of the Visu 'Update rate' and the 'VISU_TASK'](#)
 - [Debugging a Visu Exception](#)
 - [Visu: Dialogs with and without directly passing variables \({attribute 'VAR_IN_OUT_AS_POINTER'}\)](#)
 - [Creating and using your own dialog](#)
 - [Visu: Using Events of the User Management \(Login/Logout\)](#)
 - [Visu, Linux: Multitouch problems on Targets](#)