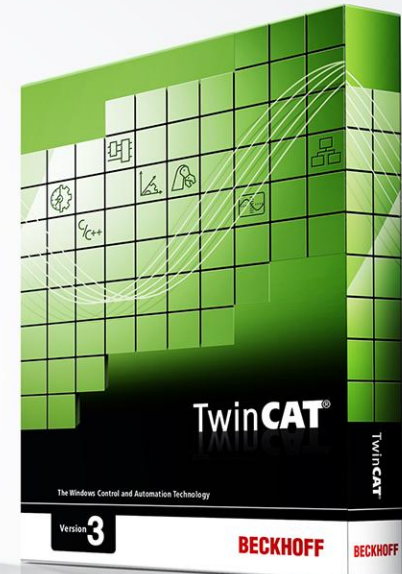
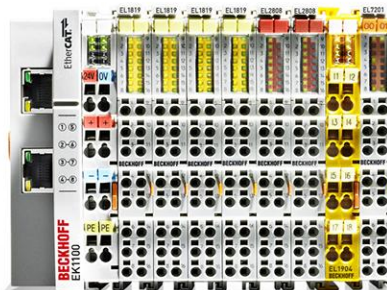




BECKHOFF

TwinCAT HMI Symbols

Training

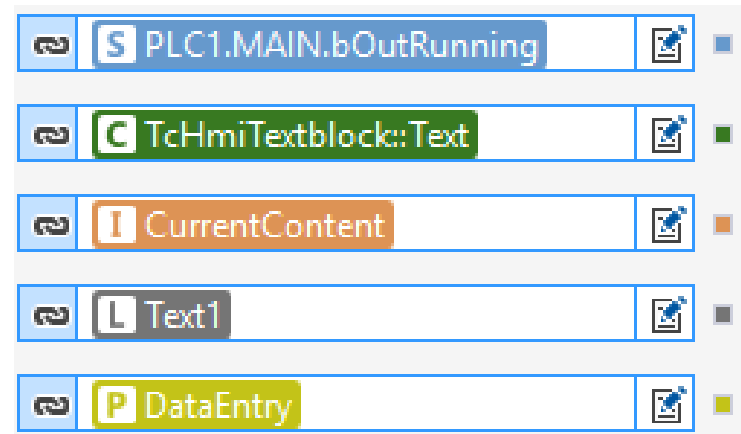
3/21/2019



- A TwinCAT HMI symbol is an address reference to where data is stored
- The address location depends on the symbol's type

- There are the following symbol types

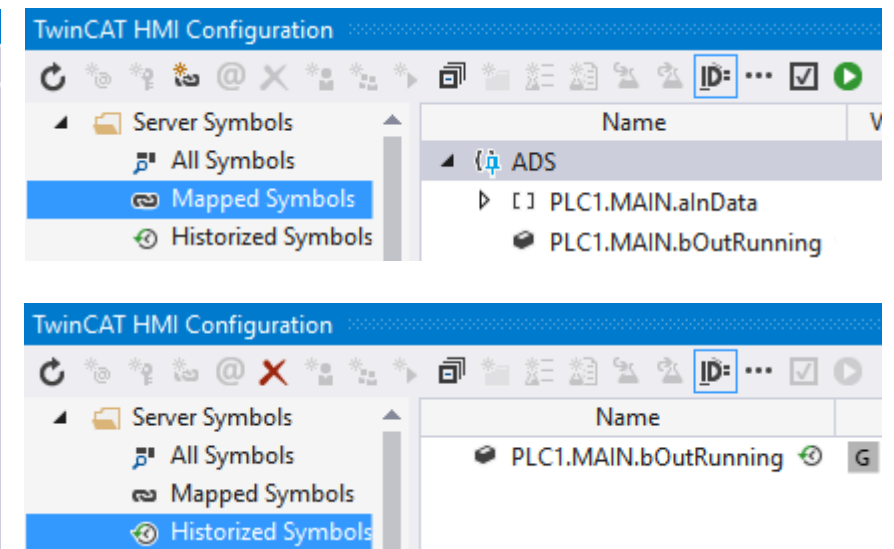
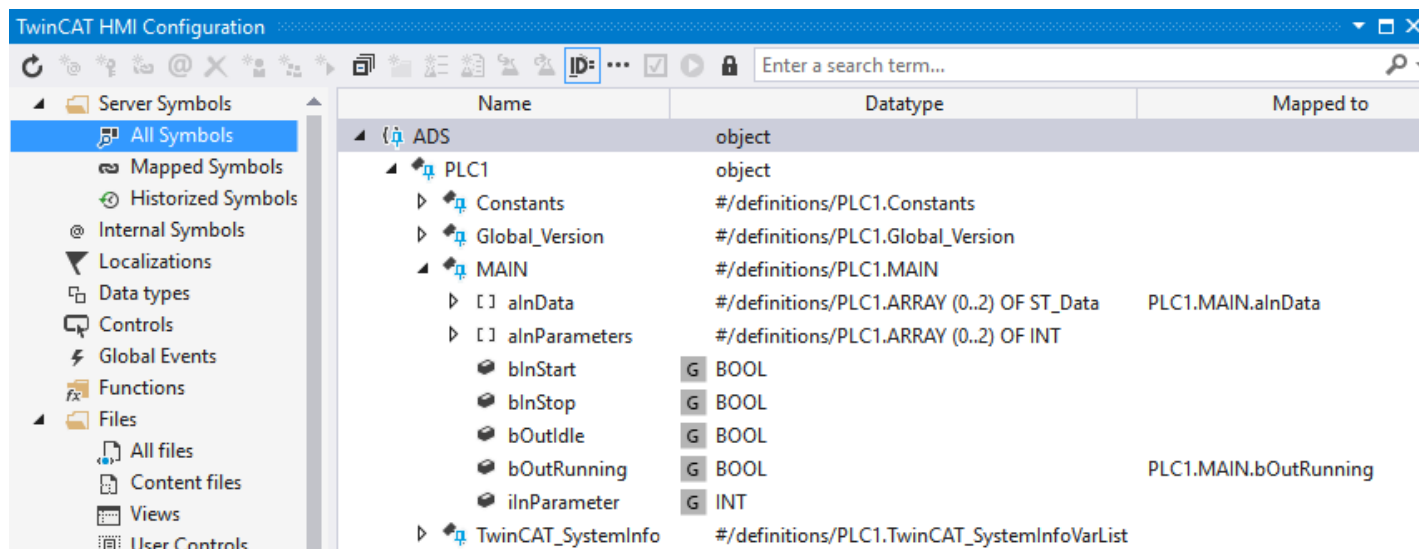
- Server
- Control
- Internal
- Locale
- Parameter*



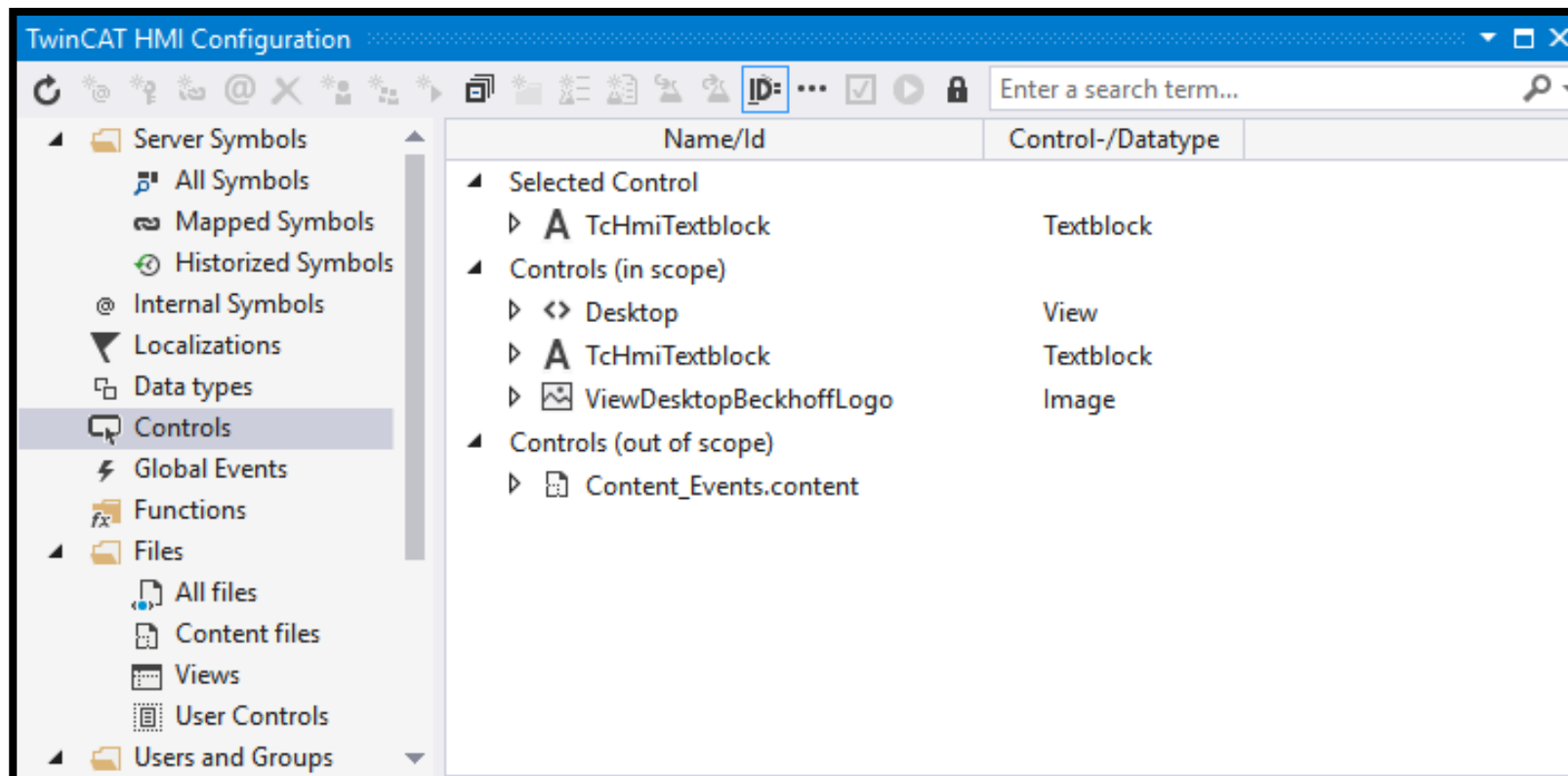
- All symbols can be viewed within the TwinCAT HMI Configuration window

*Parameter is context specific and will only show up when within a User Control or Action Template

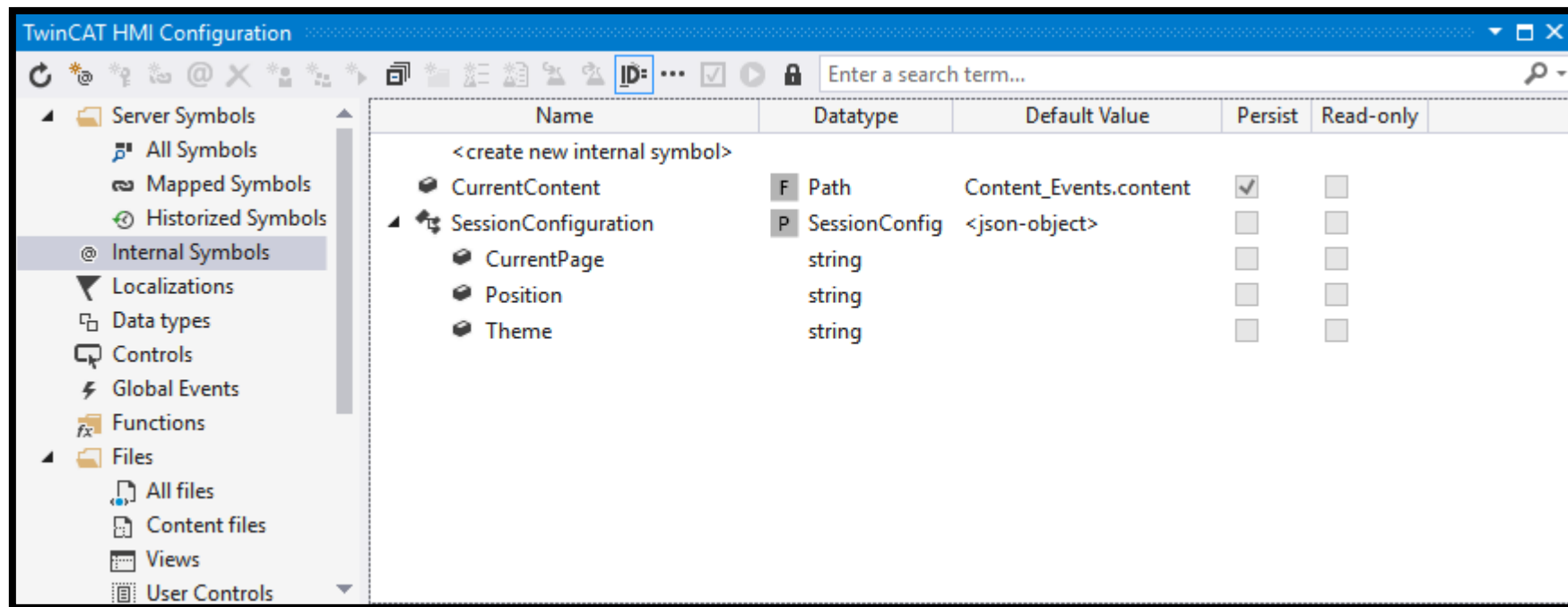
- A Server symbol will address data from server extensions, and will only show up in the configuration window if the extension is loaded and configured properly
 - ‘All Symbols’ displays symbols the HMI Engineering Server can see
 - ‘Mapped Symbols’ will display all symbols that have been assigned an address
 - ‘Historized Symbols’ shows any symbols that have trend settings, must be mapped first
 - [InfoSys Link on configuring Server Symbol bindings](#)



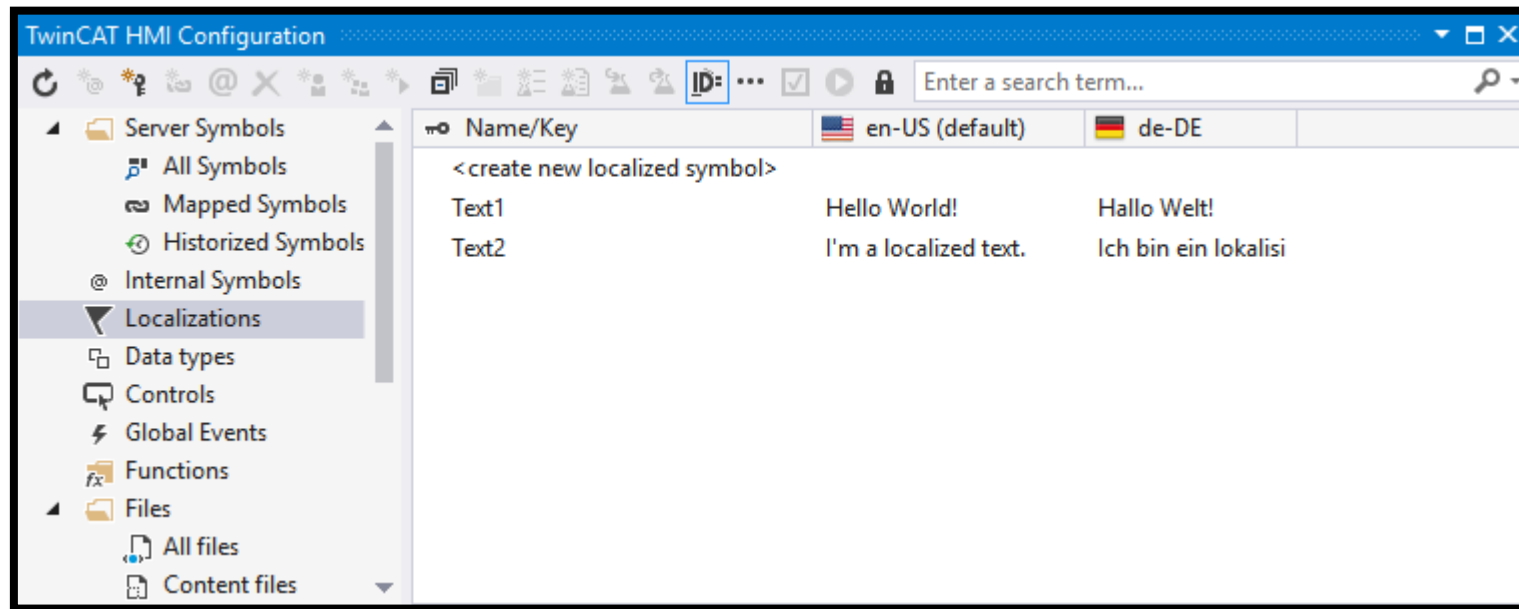
- A Control symbol will address a control's various attributes
 - 'Selected Control' is the current selected control within the Designer
 - 'Controls (in scope)' are controls within the current View, Content, or User Control
 - 'Controls (out of scope)' shows controls within other View, Content, or User Controls



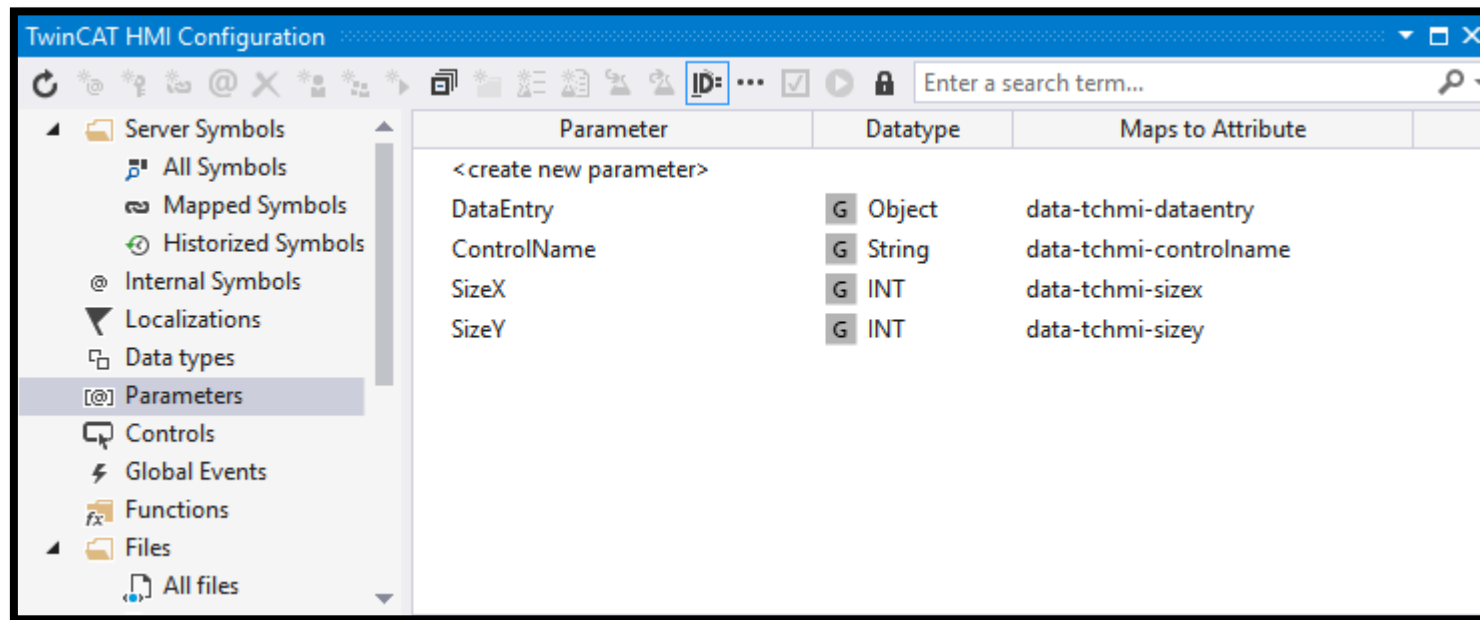
- An Internal symbol holds data unique to the current client locally
 - Can be used to keep track of the currently navigated content
 - Can be used to store client-side configuration settings with using custom datatypes
 - “Persist” will store that internal symbol data inside the HMI client and load from it when the client opens later



- A Locale symbol will address a locale key and return a localized string in the language of the client's set locale.
 - Below example: Text1 Symbol will return "Hello World!" if the client locale is set to English, "Hallo Welt!" if the client locale is set to German.



- A Parameter symbol can be thought of like VAR_IN_OUT variables
- You would assign parameter symbols to be inputs to a User Control or Action Template



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