

Description: Guide to using Commands with a TrendWorX64 Viewer.

General Requirement: Familiarity with the TrendWorX64 Viewer, Commanding in general and/or enabling Commands through the Asset Navigator Control.

Introduction

Before the introduction of Commanding you were required to use scripting to interact with controls like the TrendWorX64 Viewer. Commanding provides a simpler, more intuitive, and easier to maintain way to send these commands to controls.

This document will go over the commands that can be sent to a TrendWorX64 Viewer. More information about Commanding in general or with respect to other controls can be found in other application notes or in the help files.

If you are unfamiliar with any aspects of Commanding, please refer to the application note entitled, *GENESIS64 – Commanding Introduction* to get started.

NOTE: All properties named **Index** are zero-based, meaning the first object always has an Index of 0.

NOTE: The TrendWorX64 Viewer can only receive commands. It cannot send any.

Commands for a TrendWorX64 Viewer Target

Create Pen

This command adds a new pen to the TrendWorX64 Viewer. It exposes most of the pen properties available in TrendWorX64 Viewer configuration.

Delete Pen

The Delete Pen command will remove a pen from a TrendWorX64 Viewer. The method of deletion is specified by the **Delete** parameter.

- **Delete: Specific** – Use either the **Name** of the pen (as shown in the configuration tree) or the **Index** to specify which pen is deleted. If both the Name and the Index are specified, the Name takes priority.
- **Delete: All** – Delete every pen in the viewer.

- **Delete: Selected** – Only the currently selected pens will be deleted. Pens can be selected in the legend.

If no pen is found for the given parameters (such as when doing a Delete: Selected with nothing selected, or a Delete: Specific for an Index that doesn't exist), nothing will happen.

Edit Pen

The Edit Pen command will change the settings of a pen in the TrendWorX64 Viewer. **PenName** determines the pen to edit (the name is shown in the configuration tree of the TrendWorX64 Viewer), or **Index** if PenName is left blank. **NewPenName** property allows you to change the pen name.

SelectedProperties determines the list properties to change for your pen. Click the "Browse/Edit..." drop down button to see a dialog that will help you choose the properties you want.

Export Statistic

The Export Statistic command just shows the Export Statistics dialog using default options (no intermediate dialog is displayed).

Load Trend Configuration

The Load Trend Configuration command will load a pre-created TrendWorX64 Viewer configuration into the targeted TrendWorX64 Viewer.

Navigate

The Navigate command will navigate forward or back through the TrendWorX64 Viewer in Freeze mode. The **Navigate** property determines how to navigate.

- **Navigate: Back** – Go back one increment, same as the "Back" button in the ribbon.
- **Navigate: Forward** – Go forward one increment, same as the "Forward" button in the ribbon.
- **Navigate: Home** – Jump to the original (starting) time range.
- **Navigate: End or Now** – Jump to the current time. ("End" and "Now" are identical with regards to a TrendWorX64 Viewer.)

If the TrendWorX64 Viewer is not in freeze mode the Navigate command will have no effect.

The **Steps** parameter is not applicable to the TrendWorX64 Viewer.

Print

The Print command prints some or all of the TrendWorX64 Viewer. **Area** determines whether you are printing the whole control or just the current view (chart). **WhiteBackground** will force the printer to use a white background, even if the normal background color is different.

ShowPrintDialog will determine whether the printer dialog is shown, otherwise the default or specified printer and settings will be used and the print will happen immediately. **PrinterName** specifies a specific printer to use instead of the default.

NOTE: Both the **ShowPrintDialog** and the **PrinterName** parameters are ignored in Silverlight environments. The runtime print dialog will always be shown.

NOTE: The Print Configuration command is not supported in Windows RT or Windows Phone environments.

Refresh

The Refresh command causes the data to be refreshed in the TrendWorX64 Viewer. Historical data will be re-queried from the historical server. The refresh will have no effect on live (DA) data.

The **Area** parameter determines whether the entire control is refreshed or just the current view (chart).

Save Configuration

The Save Configuration command will save the TrendWorX64 Viewer configuration to the specified **FileName**. When **Overwrite** is True, an existing file with the specified name will be overwritten.

NOTE: No message will be shown if the specified file already exists and Overwrite is set to False. The save action will simply not do anything in that case.

NOTE: The Save Configuration command is not supported in Silverlight, Windows RT, or Windows Phone environments.

Select Element

The Select Element command allows you to change the tab or select a chart in the TrendWorX64 Viewer. **Element** specifies the whether you are selecting a tab or chart.

NOTE: It is not recommended to configure tabs or multiple charts in TrendWorX64 Viewer. It is preferred to use GraphWorX64 layout controls.

ElementName or **Index** are used to specify the particular tab or chart to be selected.

- **Element: Tab** – Activates the specified tab.
- **Element: View** – Activates the specified chart. This command is most useful if you have more than one chart object within a TrendWorX64 Viewer tab. The selected chart will receive any subsequent commands.
- **Element: Row** – This option is not applicable to the TrendWorX64 Viewer.
- **Element: Object** – Selects a pen with given name or index in Legend.

Set Freeze Mode

This command freezes or unfreezes the TrendWorX64 Viewer.

- **Action: Freeze** – Puts the viewer into freeze mode.
- **Action: Unfreeze** – Takes the viewer out of freeze mode.
- **Action: Toggle** – If the viewer is frozen, unfreeze it. If it's unfrozen, freeze it.

Set Period

The Set Period command sets the trend period of the TrendWorX64 Viewer. This is the same setting as the Trend Period specified in configuration mode on the Chart object's "Time & Rate" tab.

NOTE: It is not recommended to use Custom Alignment.

Set Time Range

The Set Time Range command sets the trend period (like the "Set Period" command) but using a specific **StartTime** and **EndTime** rather than a time period.

Various **TimeRangeType** options allows you to change only **StartTime** or **EndTime** or to define the new range using an interval.

Unlike Set Period, this command will automatically put the viewer into Freeze mode, if it is not already.

Set Visibility

The Set Visibility command allows you to hide or show pens in the TrendWorX64 Viewer. For a TrendWorX64 Viewer target, the **ObjectType** must be set to Pen. Column and Visual ObjectTypes do not apply to the TrendWorX64 Viewer.

ObjectName is the name of the pen whose visibility you want to change. If ObjectName is not specified, **Index** is used.

The **Visibility** property specifies whether you want the command to show the column, hide it, or toggle between hidden and shown.

Zoom

This command sets the zoom level of the viewer.

- **Action: Set** – Sets the zoom level as set with **Unit** and **Zoom**.
- **Action: Reset** – Resets to the default zoom level. Ignores other parameters.
- **Unit: Percentage** – Zooms in or out to the given percentage value in the **Zoom** parameter.
- **Unit: Scale** – Zooms into the scale specified in the **Zoom** parameter (for example, Zoom of 2 zooms out to a level of twice the initial period, Zoom of 0.5 zooms in to half the initial period).
- **Unit: None** or **Unit: Level** – These Unit types are not applicable to the TrendWorX64 Viewer.
- **Axis: Time** – Only zoom on the time axis.
- **Axis: Value** – Only zoom on the value axis.
- **Axis: Both** – Zoom on both axes at the same time.

- **Type: Absolute** – Set the zoom relative to original chart settings.
- **Type: Relative** – Set the zoom relative to actual chart settings.
- **Type: AllData** – Zoom value axis to show all samples, taking auto scale margin into account.
- **Type: SelectedData** – Zoom value axis to show all samples between first and second cursor or between first cursor and last sample, if second cursor is disabled.
- **Type: CenterLastData** – Shift the value axis to show the last sample at the center of the chart.
- **Type: CenterCursorData** – Shift the value axis to show the sample selected by first cursor at the center of the chart.

Select Asset

This command adds pens for each property of given asset. Only top-level properties are visualized. **ExecuteCommands** parameter is not applicable to the TrendWorX64 Viewer.

Show Details

This command adds multiple pens defined in **DataSources** parameter and sets the trend period using a specific **StartTime** and **EndTime**.

ShowCustomDisplay, **FileName**, **LocalAliases**, **GlobalAliases**, **TargetType**, **TargetName** parameters are not applicable to the TrendWorX64 Viewer.

Export Data

This command exports the visible samples and their attributes to a file specified by **FileName** parameter.

See Data Export options in TrendWorX64 Viewer chart advanced configuration.