The Dependency Analysis Package analyzes influences of changes generated during engineering work or of changes resulting from repetitive engineering. The package increases the efficiency of additional engineering work caused by the change requests especially for a large scale project where analysis of the influences caused by change requests is rather difficult.

The Dependency Analysis Package is one of the optional packages in Automation Design Suite (AD Suite). For details on AD Suite, refer to the General Specifications “Automation Design Suite (AD Suite) VP6E5000 Engineering Server Function, VP6E5100 Standard Engineering Function” (GS 33J10D10-01EN).

**FUNCTION SPECIFICATIONS**

The Dependency Analysis Package provides Dependency Analysis Tool which is a function to analyze the dependency or interconnection of control logics, I/O, and graphic tags.

The Dependency Analysis Tool analyzes the following three types of dependency using the control logic, I/O, and graphic tag names as the analysis keys.

- Control logic dependency
- Logical and physical relation
- Graphic dependency

The following example explains the control logic dependency analysis using this package.

The control logic dependency analysis function collectively displays items such as a tag names which are connected to an analysis key. The list of connection destinations is used as a new analysis key to display the list of connection destination in a hierarchical way.

The figure below shows the conceptual diagram of the dependency analysis, which displays the first-layer tags (FIC01, GR01, TR01, and ST01) using TIC02 tag as the analysis key, and the second-layer tags (%Z02, %Z05, and %OG01) using FIC01 and ST01 of the first-layer tags as the new analysis keys.

The Dependency Analysis Tool runs on a computer where the VP6E5100 Standard Engineering Function is installed. When this tool is launched, Control Logic Dependency View, Logical and Physical Relation View, and Graphic Dependency View launch simultaneously. These views can be used to call up the same or different type of dependency views, as well as to analyze dependency using other elements as starting points. Results of the analysis can be output as an analysis result report.

![Conceptual Diagram Displaying Dependency (Control Logic Dependency)](F01E.ai)
Control Logic Dependency Analysis

The Control Logic Dependency View displays the interconnections of control logic configuration elements in hierarchical ways using the following analysis keys.

Analysis keys (control logic dependency)
- Tag names
- Tag names, data item names
- User-defined label names

For the analysis of control logic dependency, a list such as tag names of connection destinations for the analysis key is displayed. A list of connection destinations beyond that can also be displayed in a hierarchical way using the displayed connection destination as a new analysis key. Each of the dependency component displayed in a hierarchical way can be collapsed or expanded as needed. The control logic dependency analysis can be applied for field control stations (FCSs) created for CENTUM VP R6.01 or later, or those created for FCSs by earlier versions than CENTUM VP R6.01 and upgraded to R6.01 or later. Applicable FCS models are:


Logical and Physical Relationship Analysis

The Logical and Physical Relation Analysis display logical attributes and physical assignments of I/Os using the following analysis keys.

Analysis keys (logical and physical relation)
- Application module names
- Tag names
- P&ID tag names
- Station names
- I/O module names

The logical and physical relation analysis can be applied for FCSs using VP6E5210 Module-based Engineering Package. Applicable FCS models are:

- AFV30S, AFV30D, AFV40S, AFV40D, A2FV50S, A2FV50D, A2FV70S, and A2FV70D

Graphic Dependency Analysis

The Graphic Dependency Analysis displays graphical objects containing the following analysis keys in the same hierarchical manners as the control logic dependency.

Analysis keys (graphic dependency)
- VP project names
- Station names
- Window names
- Trend file names
- Tag names
- Graphic object names

Graphic dependency analysis can be performed for graphics and trends created on the human interface stations (HISs) of CENTUM VP R6.01 or later, or those created for HIS of R6.01 earlier and then upgraded to R6.01 or later.
OPERATING ENVIRONMENT

- Hardware Requirement
  Conforms to the operating environment of VP6E5100 Standard Engineering Function.

- Software Requirements
  Conforms to the operating environment of VP6E5100 Standard Engineering Function.
  Required Software:
  VP6E5100  Standard Engineering Function

MODELS AND SUFFIX CODES

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ORDERING INFORMATION

For CENTUM VP R6.04 and later, this package is bundled together with the Automation Design Suite Standard Engineering Function (VP6E51AD) and may not be ordered separately (see GS 33J10D21-01EN for details).

TRADEMARKS

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