CENTUM VP
Release Information

IM 33J01A50-01EN

IM 33J01A50-01EN
9th Edition

Introduction

This document is the release note that comes with the CENTUM VP electronic documents. It provides supplementary information not inclulded in the CENTUM VP electronic documents.

9th Edition : Aug. 2019 (YK)

Safety Precautions for Use

Safety, Protection, and Modification of the Product

- To protect the system controlled by the Product and the Product itself and to ensure safe operation, please observe the safety precautions described in this Manual. Yokogawa Electric Corporation ("YOKOGAWA") assumes no liability for safety if users fail to observe the safety precautions and instructions when operating the Product.
- If the Product is used in a manner not specified in the User's Manuals, the protection provided by the Product may be impaired.
- If any protection or safety circuit is required for the system controlled by the Product or for the Product itself, please install it externally.
- Be sure to confirm the specifications and required settings of the devices that are used in combination with the Product by referring to the instruction manual or other documents of the devices.
- Use only spare parts that are approved by YOKOGAWA when replacing parts or consumables of the Product.
- Do not use the Product and its accessories such as power cords on devices that are not approved by YOKOGAWA. Do not use the Product and its accessories for any purpose other than those intended by YOKOGAWA.
- Modification of the Product is strictly prohibited.
- The following symbols are used in the Product and User's Manuals to indicate the accompanying safety precautions:

Indicates that caution is required. This symbol for the Product indicates the possibility of dangers such as electric shock on personnel and equipment, and also indicates that the user must refer to the User’s Manuals for necessary actions. In the User’s Manuals, this symbol is used together with a word “CAUTION” or “WARNING” at the locations where precautions for avoiding dangers are described.

<French> Signale qu’il faut faire preuve de prudence. Ce symbole pour le produit signale la possibilité d’un danger pour le personnel et l’équipement comme un choc électrique, et signale également que l’utilisateur doit se référer au Manuel de l’utilisateur afin de prendre les mesures nécessaires. Dans le Manuel de l’utilisateur, ce symbole est utilisé conjointement avec la mention «CAUTION» ou «WARNING» aux endroits où sont décrites les précautions pour éviter les dangers.

Indicates that caution is required for hot surface. Note that the devices with this symbol become hot. The risk of burn injury or some damages exists if the devices are touched or contacted.

<French> Signale qu'il faut faire preuve de prudence avec la surface brûlante. Les appareils sur lesquels est apposé ce symbole risquent de devenir brûlants. Tout contact physique ou matériel avec ces appareils risque de provoquer des brûlures ou des dommages.

Identifies a protective conductor terminal. Before using the Product, you must ground the protective conductor terminal to avoid electric shock.

Identifies a functional grounding terminal. A terminal marked "FG" also has the same function. This terminal is used for grounding other than protective grounding. Before using the Product, you must ground this terminal.

Indicates an AC supply.

Indicates a DC supply.

| Indicates that a component such as a power supply switch is turned ON.

○ Indicates that a component such as a power supply switch is turned OFF.

Notes on Handling User's Manuals

- Hand over the User's Manuals to your end users so that they can keep the User's Manuals on hand for convenient reference.
- Thoroughly read and understand the information in the User's Manuals before using the Product.
- For the avoidance of doubt, the purpose of the User's Manuals is not to warrant that the Product is suitable for any particular purpose but to describe the functional details of the Product.
- Contents of the User's Manuals are subject to change without notice.
- Every effort has been made to ensure the accuracy of contents in the User's Manuals. However, should you have any questions or find any errors, contact us or your local distributor. The User's Manuals with unordered or missing pages will be replaced.

Warning and Disclaimer

- Except as specified in the warranty terms, YOKOGAWA shall not provide any warranty for the Product.
- YOKOGAWA shall not be liable for any indirect or consequential loss incurred by either using or not being able to use the Product.

Notes on Software

- YOKOGAWA makes no warranties, either expressed or implied, with respect to the Software Product's merchantability or suitability for any particular purpose, except as specified in the warranty terms.
- Purchase the appropriate number of licenses of the Software Product according to the number of computers to be used.
- No copy of the Software Product may be made for any purpose other than backup; otherwise, it is deemed as an infringement of YOKOGAWA's Intellectual Property rights.
- Keep the software medium of the Software Product in a safe place.
- No reverse engineering, reverse compiling, reverse assembling, or converting the Software Product to human-readable format may be performed for the Software Product.
- No part of the Software Product may be transferred, converted, or sublet for use by any third-party, without prior written consent from YOKOGAWA.

Notes on Hardware

Appearance and Accessories

Check the following items when you receive the Product:

- Appearance
- Standard accessories

Contact us or your local distributor in the following cases:

- The Product coating is peeling off.

- The Product itself is damaged.
- Any accessories are missing.

If the following label turns dirty and the information on it becomes illegible, or if the label is peeling off, order a new one with the part number T9029BX to replace it.

 : Label attached to the Products such as the power supply module.

Model and Suffix Codes

The name plate on the Product indicates the model and suffix codes. Verify the model and suffix codes with those in the General Specifications (GS) to ensure that the Product matches the order specifications. If you have any questions, contact us or your local distributor.

Style Number

For some products, differences in the functions and usage of the product are distinguished by style number. The style number is indicated in the style number field on the name plate of the product.

Documentation Conventions

Symbols

The following symbols are used in the User's Manuals.

Indicates precautions to avoid a danger that may lead to death or severe injury.

Indicates precautions to avoid a danger that may lead to minor or moderate injury or property damage.

IMPORTANT

Indicates important information required to understand operations or functions.

TIP

Indicates additional information.

SEE ALSO

Indicates referenced content.

In online manuals, you can view the referenced content by clicking the links that are in green text. However, this action does not apply to the links that are in black text.

Typographical Conventions

The following typographical conventions are used throughout the User's Manuals.

Commonly Used Conventions throughout the User's Manuals

- Δ Mark
  Indicates that a space must be entered between character strings.
  Example:

  ```
  .ALΔPIC010Δ-SC
  ```

- Character string enclosed by braces { }
  Indicates character strings that may be omitted.

  Example:

  ```
  .PRΔTAG{Δ.sheet name}
  ```

Conventions Used to Show Key or Button Operations

- Characters enclosed by brackets [ ]
  When characters are enclosed by brackets in the description of a key or button operation, it indicates a key on the keyboard, a button name in a window, or an item in a list box displayed in a window.

  Example:

  To alter the function, press the [ESC] key.

Conventions Used in Command Syntax or Program Statements

The following conventions are used within a command syntax or program statement format:

- Characters enclosed by angle brackets < >
  Indicate character strings that user can specify freely according to certain guidelines.

  Example:

#define <Identifier> <Character string>

- "..."
  Indicates previous command or argument that may be repeated.

  Example:

  Imax (arg1, arg2, ...)

- Characters enclosed by brackets [ ]
  Indicate character strings that may be omitted.

  Example:

  sysalarm <format character string> [, <output value>…]

- Characters enclosed by separators | |
  Indicates character strings that can be selected from more than one option.

  Example:

  opeguide | <format character string> [, <output value>...] |
  OG, <element number>

Drawing Conventions

Drawings used in the User's Manuals may be partially emphasized, simplified, or omitted for the convenience of description.

Drawings of windows may be slightly different from the actual screenshots with different settings or fonts. The difference does not hamper the understanding of basic functionalities and operation and monitoring tasks.

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Trademark Acknowledgements

- CENTUM, ProSafe, Vnet/IP, PRM, Exaopc, Exapilot, Exaquantum, Exasmoc, Exarqe, Multivariable Optimizing Control/Robust Quality Estimation, StoryVIEW and FieldMate Validator are the registered trademarks or trademarks of Yokogawa Electric Corporation.
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1. Usage Notes for R6.07

This chapter describes the points to be noted when applying the version number R6.07 of CENTUM VP.

1.1 Precautionary Notes

1.1.1 Note on Using PC

Take note of the following for restarting your CENTUM VP computer.

How you restart your computer

If you change settings of CENTUM VP software or of Windows OS and restarting your computer is required, you must reset the hardware settings for your computer and peripherals such as control bus interface card.

Specifically, you must shut down the Windows and press the power button to restart the computer.

Precautions for using Legacy model in Windows 10 or Windows Server 2016

If Legacy model is used for the security model in Windows 10 or Windows Server 2016, you can apply Windows update programs released in December 2017 or earlier.

Do not apply Windows update programs released in January 2018 or later because the specification changes made by Windows update programs cause problems related to Windows operations. As the result, response is not available for security concerns that are supposed to be fixed by Windows update programs released in January 2018 or later. Also, response is not available for issues such as modification of functions related to OS.

If Standard model is used for security model, this problem does not occur.

1.1.2 Note on Setting IP Addresses

- When you specify an IP address, do not enter “0” in the upper digits.
  If you enter any “0” as in “08” and “009”, a communication error may result during communication with the connected device.

  Incorrect: 172.16.01.08 or 172.16.09.02

  Correct: 172.16.1.8 or 172.16.9.2

  This note applies to the cases where the entries or settings in the definition files of the following functions are set on Windows Vista, Windows Server 2008, Windows Server 2008R2, and Windows 7.

  - HIS Utility
    [Computer Name of OPC A&E Server] of OPC A&E server connection settings in the CAMS for HIS tab
  - Multiple Project Connection Builder
    [IP Address] in the Projects tab
  - UGS Builder
    [Destination Address] for STARDOM, Modbus (only when Route Type is Ethernet), EtherNet/IP, and OPC DA controller
  - UGS Block Attributes Uploader
    [FCN/FCJ Server Name/Address]
  - UGS OPC browser command
    [OPC Server Name/Address]
  - SIOS Builder
    [Host Name Or IP Address] in the SIOS Engineering window, OPC Browse List dialog box, and OPC Browse Execute dialog box
  - SIOS definition files
    OPC DA Server definition file: OPC Server Information element and OPC Server Execution Host Name that are specified as <OpcInfo> settings

    OPC A&E Server definition file: OPC Server Information element and OPC Server Execution Host Name that are specified as <OpcInfo> settings

- In particular, check the IP address specifications for the above settings when you upgrade the OS.
  How to recover: Delete “0” in the upper digits of IP address settings.

1.1.3 Non-Redundant V Net and Absence of Ethernet

The non-redundant V net is allowed only for the CENTUM VP Entry Class. For other types of CENTUM VP systems, non-redundant V net is not allowed.

Moreover, the absence of Ethernet is allowed only for the CENTUM VP Entry Class. However, under one of the following circumstances, Ethernet is necessary even for the CENTUM VP Entry Class.

- When the system has more than two domains;
- When the system has more than 1000 graphic views;
- When the HIS has more than 8 trend blocks;
- When the HIS has a station connected through Ethernet interface;
  When a system has any of APCS, GSGW, SIOS, HIS-TSE, or CGW stations connected through Ethernet;
- When a project has more than 8000 tags for monitoring
- When a project has more than 9 HISs
- When you use CAMS for HIS

1.1.4 Notices on Station Numbers

This section describes the notices on the station numbers.

Notices on Station Number Becomes Smallest

The HIS explained here includes Exaopc station.

The types of communication devices explained here are as follows:

- ABC11D-V
- ABC11D-Q
- ABC11S-Q
- ABC11D-A
- ABC11S-A
- ACG10S-F

ABC11D-H, ABC11S-H, ABC11D-L, ABC11S-L, and ACG10S-E are irrelevant to these notices.

Do not set the smallest value in the domain to the V net station of HIS and communication devices.

When you set station numbers for HIS and communication devices, you must ensure that two or more control stations (such as FCS or SCS) have smaller numbers than the ones for the host station. This is because the station number of the host station must not be the smallest value during the maintenance of the station with a smaller station number than the host station.

If a domain contains HIS and the communication devices only, the station number of HIS must be the smallest.

If the station number of HIS is the smallest in the domain, a system alarm of “Communication Fail” for the domain may be initiated on this HIS at the timing that offline download to FCS fails or restart of HIS fails, followed by a system alarm of “Communication Recover” one second later. While “Communication Fail” error occurs, the trend data acquisition may be skipped or the process data on the tuning view may be indicated temporarily with **** on the HIS.

If the station number on V net side of a communication device is the smallest station number in the domain (domain A), a system alarm of “Communication Fail” may be initiated on HIS in the other domain (domain B) of the communication device at the timing of initiating fail on other stations in domain A, followed by a system alarm of “Communication Recover” one second later.

While “Communication Fail” error occurs on HIS in domain B, communication to FCS in domain A fails and the trend data acquisition may be skipped or the process data on the tuning view may be indicated temporarily with ****. No abnormality occurs on stations except for HIS in domain B.

TIP

The station number of a station other than HIS or communication device (such as the station number of a FCS or SCS) can be the smallest number in the domain. No problem occurs.

1.1.5 Connecting Ethernet Cable with SB311 Modules: KFCS2/KFCS

The Ethernet cable connecting to SB311 modules is used for transmitting SOE event messages to the SOE Server via appropriate Ethernet Hub. The Ethernet cable at FCU is connected to CN1 connector (RJ-45) of SB311. After completing the Ethernet cable (10Base-T) connection, attach the clamp filter on the Ethernet cable as near to CN1 connector as possible in order to enhance noise tolerance.

An example of Ethernet cable connection is shown below.

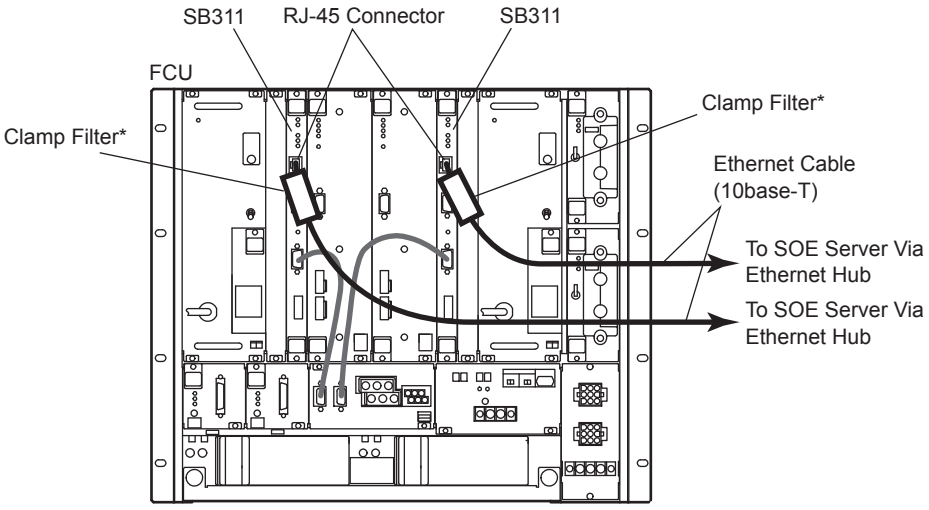

Figure 1.1.5-1 Example of Connecting Ethernet Cables with Clamp Filter

Clamp Filter Set: KFCS2/KFCS

One Ferrite Core (part number A1193MN) per SB311

Cable fastener (supplied with ferrite core)

Attaching the Clamp Filter (Ferrite Core): KFCS2/KFCS

1. Use your finger to release the two locking hooks of a clamp filter. The clamp filter can then be opened up to 150 degrees.
2. Fit the Ethernet cable into the cylindrical gap in the opened clam filter.
3. Close the clamp filter and lock the two locking hooks.
4. Put a tie wrap through on side of the clamp filter as near to CN1 connector as possible and fasten the tie wrap over the cable sheath to fix the clamp filter.

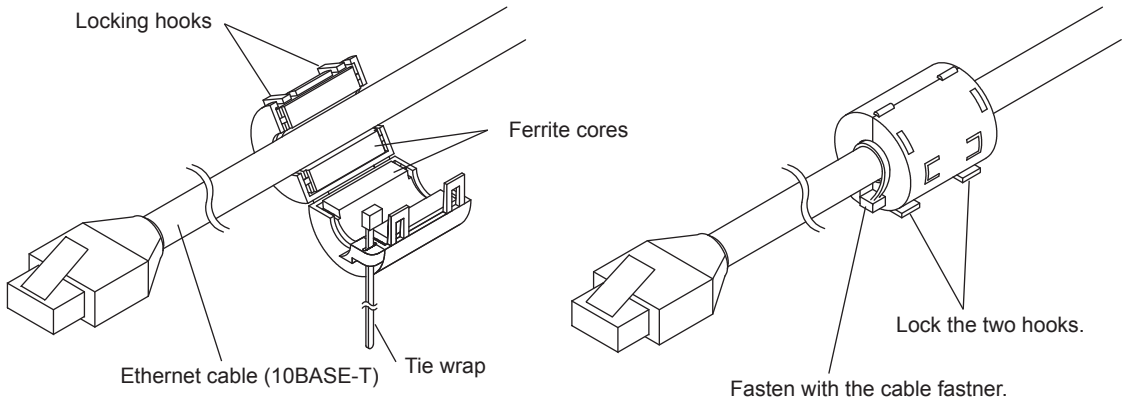

Figure 1.1.5-2 Attaching a Clamp Filter

IMPORTANT

- The clamp filter case is made of plastic, and so may crack when opened and closed at a sub-zero temperature (in centigrade) or when a mechanical shock is given, such as if it falls. Be careful to follow the working and storage temperature limits.
- When fixing the clamp filter by putting a tie wrap through one side of the clamp filter and fastening the tie wrap over the cable sheath, be careful not to block the way to take in/out the next cards (e.g. processor card)

1.1.6 Install

Take notes of the following for installing.

Configuring Windows Not to Join the Customer Experience Improvement Program (CEIP)

When you configure Windows on a computer where CENTUM VP is to be installed, you must configure it not to join the Microsoft Customer Experience Improvement Program (CEIP). In addition, you must refuse to join the CEIP when a dialog box that prompts you to join the CEIP appears during normal operation of CENTUM VP.

If your computer has already joined the CEIP, change the setting to withdraw from it. Follow these steps to change the setting, according to the version of your Windows OS:

For Windows 7

1. From your desktop, select [Start] > [Control Panel] > [Action Center].
2. In the left pane, select [Change Action Center settings].
3. From Related settings, click [Customer Experience Improvement Program settings].
4. In the Customer Experience Improvement Program dialog box, select [No, I don't want to participate in the program.] and click [Save Changes].
   If you are required to enter the administrator's password or confirm the action, do so accordingly.
5. Restart your computer.

TIP

If the items in the Customer Experience Improvement Program dialog box are grayed out and you cannot change the setting, then follow these steps:

1. In the Start Search box of the Start menu, type `gpedit.msc` and press the Enter key.
   The Local Group Policy Editor window appears.
2. From the tree in the left pane, select [Computer Configuration] > [Administrative Templates] > [System] > [Internet Communication Management] > [Internet Communication settings].
3. In the right pane, double-click [Turn off the Windows Customer Experience Improvement Program].
4. In the dialog box that appears, select [Enabled] and click [OK].
5. Restart your computer.

For Windows Server 2008 R2

1. Log on to Windows as a user with administrative rights.
2. From your desktop, select [Start] > [Server Manager].
3. From the tree in the left pane, specify the root node and expand [Resources and Support] in the right pane.
4. Click [Participate in CEIP] or [Configure CEIP]. Either item is displayed, depending on the current settings.
5. In the Customer Experience Improvement Program Configuration dialog box, select [No, I don't want to participate] and click [OK].
6. Restart your computer.

TIP

If the items in the Customer Experience Improvement Program Configuration dialog box are grayed out and you cannot change the setting, then follow these steps:

1. In the Start Search box of the Start menu, type `gpedit.msc` and press the Enter key.
   The Local Group Policy Editor window appears.
2. From the tree in the left pane, select [Computer Configuration] > [Administrative Templates] > [System] > [Internet Communication Management] > [Internet Communication settings].
3. In the right pane, double-click [Turn off the Windows Customer Experience Improvement Program].
4. In the dialog box that appears, select [Enabled] and click [OK].
5. Restart your computer.

Notes on Configuring IT Security Settings

When configuring IT security settings so as to set the security model to Standard model or Strengthened model and the user management type to Domain management or Combination management, the following error message may appear, preventing application of the security settings.

```
Error message: ERROR Index was outside the bounds of the array
```

This problem occurs when both of the following conditions are met:

- One or more of the following products are installed on the computer:
  - CENTUM VP R5.03.20 or later
  - ProSafe-RS R3.02.10 or later
  - Exapilot R3.96.00 or later
  - PRM R3.12.00 or later
  - VTSPortal R2.04.00 or later
- The computer name of the computer where you attempted configuration of IT security settings (*1)is registered in `C:\Windows\System32\drivers\etc\hosts`.

*1: Full computer name without a domain suffix.

As an avoidance, do not describe computer names of domain member computers in the file `C:\Windows\System32\drivers\etc\hosts`. If the error occurs, correct the hosts file and then configure IT security settings.

Program Compatibility Assistant Dialog Box Displayed after Closing Installation Menu

After closing the installation menu, Program Compatibility Assistant dialog box may be displayed. If displayed, select [This program installed correctly].

Once you perform this operation, the Program Compatibility Assistant dialog box will not be displayed any more. This dialog box does not indicate any problem.

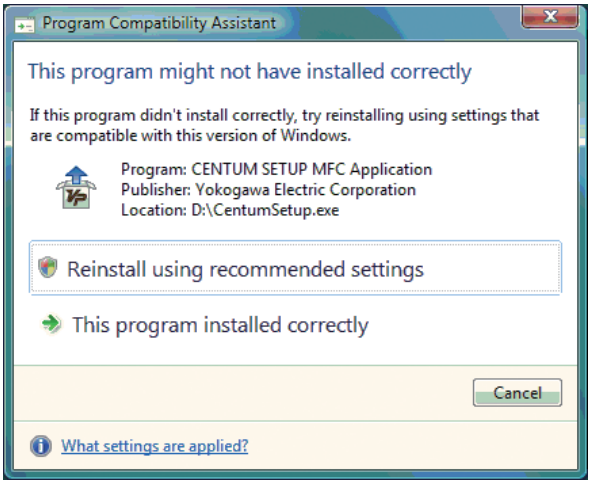

Figure 1.1.6-1 Program Compatibility Assistant Dialog

Restoration Procedure When [Reinstall using recommended settings] Was Selected

If you mistakenly selected [Reinstall using recommended settings] in the Program Compatibility Assistant dialog box, the installer is configured to run in compatibility mode. Follow these steps to restore:

1. Right-click `<CENTUM VP installation medium>\Launcher.exe` and select [Properties]. The Launcher.exe Properties dialog box appears.
2. Open the Compatibility tab.

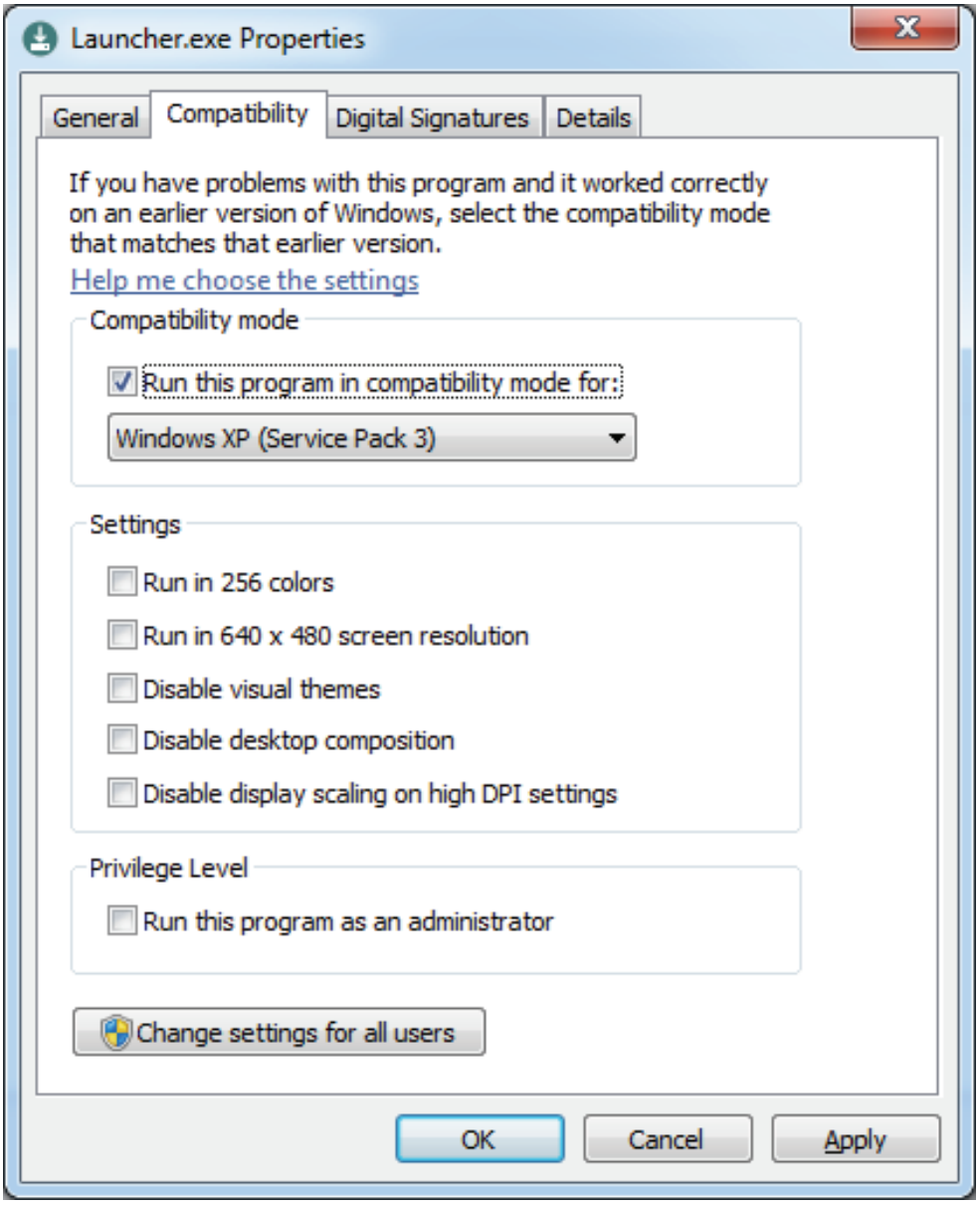

Figure 1.1.6-2 Compatibility tab

3. Clear the [Run this program in compatibility mode for] check box.

TIP

If the [Run this program in compatibility mode for] check box is disabled, click [Change settings for all users].

4. Click [OK].

Regarding 497-day Uptime of Computers and Servers

Due to imperfection of Windows operating systems, when a computer or a server is running the following operating systems continuously for more than 497 days, an error occurs on the Ethernet communication of the computer or the server.

- Windows Server 2008 R2 SP1
- Windows Server 2008 SP2
- Windows 7 SP1

When installing CENTUM VP R5.01.20 or later version of CENTUM VP software (ENG, HIS, UGS, SIOS) to computers or servers, a hotfix program will be automatically applied.

If a computer running the above operating systems runs continuously for more than 497 days, and if CENTUM VP is not installed on it, apply the update programs that are stored in the folder path of the installation medium.

Computers on which CENTUM VP is not installed refer to the file server, the domain controller, OPC client, and HIS-TSE client.

The folder path is as follows.

```
\CENTUM\Redistributable\KB2553549\
```

The update programs are as follows:

- Windows6.1-KB2553549-v2-x64.msu: Windows Server 2008 R2 SP1 or Windows 7 (64bit) SP1
- Windows6.1-KB2553549-v2-x86.msu: Windows 7 (32bit) SP1
- Windows6.0-KB2553549-x86.msu: Windows Server 2008 SP2

1.1.7 Automation Design Suite

This section provides precautions when using the Automation Design Suite.

Software Revision of Automation Design Suite Installed into CENTUM VP Software

The software revision of Automation Design Suite installed into CENTUM VP software varies according to the software revision of CENTUM VP software.

The following table shows the software revisions of CENTUM VP and their corresponding software revisions of Automation Design Suite.

Table 1.1.7-1 Software revisions of CENTUM VP and the software revisions of Automation Design Suite

Software revision of CENTUM VP	Software revision of Automation Design Suite
R6.07.00	R1.07.00
R6.06.00	R1.06.00
R6.05.00	R1.05.20
R6.04.00	R1.05.00
R6.03.10	R1.03.00
R6.03.00	R1.03.00
R6.02.00	R1.02.00
R6.01.10	R1.01.00

Precautions When CENTUM VP Standard Engineering Function Coexists with ProSafe-RS Safety System Engineering and Maintenance Function

If you install CENTUM VP standard engineering function and ProSafe-RS safety system engineering and maintenance function, common functions of the installed Automation Design Suite are also installed. If you install CENTUM VP standard engineering function and ProSafe-RS safety system engineering and maintenance function to one computer, the newer revision is installed for the common function of Automation Design Suite regardless of the order of installation.

If the revision of Automation Design Suite is different between CENTUM VP and ProSafe-RS, refer to the IM for common functions of the newer revision product.

Common functions are provided as follows.

- Automation Design Server Administration Tool (ADS Administration Tool)
- Dialog windows that are commonly used in Automation Design Organizer (AD Organizer), for example Check-out window, Search window, and Filter window.
- System Structure Navigator
- Properties window
- Check-in window
- Message window
- Revision History window
- ModPack Editor, ModPack Navigator,and ModPack List window

Precautions When Managing Automation Design Projects of CENTUM VP and ProSafe-RS by Using a Computer that Automation Design Server Is Installed

If you manage Automation Design Project (AD project) of CENTUM VP and ProSafe-RS by using a computer with Automation Design Server (AD server), you must make the revision of AD server the same as the revision of newer Automation Design Suite.

Precautions When CENTUM VP and ProSafe-RS Are Installed on the Same Computer

When CENTUM VP and ProSafe-RS are installed on the same computer, do not uninstall the software of only either of them. If the function is no longer needed, delete the licenses of the software packages.

You must also note that once CENTUM VP and ProSafe-RS are installed on an AD Server computer, the AD Server handles data of CENTUM VP and ProSafe-RS together. This means that you will not be able to export only the data of CENTUM VP from this AD Server and migrate it to another AD Server.

Precautions When Restarting the AD Server

Before you restart your AD Server, make sure the following:

- AD Organizer is closed.
- System View and VP builders that are accessing data of VP projects registered in an AD project are closed.

If you restart the AD Server without closing AD Organizer, System View, or VP builders, a connection error will result on them. If this happens, restart the AD Organizer, System View, or the VP builder.

Precautions when Configuring Encryption Settings for the Automation Design Master Database

You can set up encryption of the Automation Design Master Database (ADMDB) by configuring optional settings of the AD Server. To change the ADMDB encryption settings, use the ADS Administration Tool. Note the following points when you change the encryption settings:

- After you change the ADMDB encryption settings, restart the computer with AD Server. Encryption or decryption processing runs when the computer restarts.
- Depending on the database size, it may take a long time (a few tens of minutes) for the computer with AD Server to restart.
- While the computer is restarting, you cannot perform any operation from AD Organizer. In addition, you cannot perform operations that make changes to data of VP projects registered in an AD project from System View or VP builders.

Precautions When Changing the Computer Name, IP Address, or Port Number of the AD Server

If you have changed any one of the computer name, IP address, and port number of the AD Server where VP projects are registered, start Revision History Utility from the System Structure Navigator of AD Organizer. In Revision History Utility, you do not need to do any operation. Just close it. Then, you can perform operations that make changes to project data through System View and VP builders.

If you do not perform the above operation, an error will result when you try to perform operations that make changes to project data from System View. In addition, VP builders will start in reference-only mode.

Precautions About Automatic Refreshing of Windows

Some windows in AD Organizer, such as the System Structure Navigator and Check-in window, are not refreshed automatically, preventing users from confirming the result of operation they perform. The following table shows the users who suffer this problem, operations for which certain window is not refreshed automatically to show the result of operation, and the windows that are not refreshed.

Table 1.1.7-2 Users of AD Organizer, operations, and windows that are not refreshed automatically

User of AD Organizer	Operation	Window that is not refreshed automatically

User performing the operation	• The following operations in the Process I/O Editor, Communication I/O Editor, or IOM Definition Editor:
	  • Create a node or I/O module
	  • Delete a node or I/O module
	• Create a drawing module in module binding
	• Create an FCS in System View
	• Change VP project properties in Project's Attribution Utility
		System Structure Navigator

User performing the operation	Save data in individual editors	Check-in window
User performing the operation	Add a label	Revision History window
Other users	All operation	All windows

To confirm the latest view of the windows, you must refresh the window manually. Follow either of these steps to refresh the window manually:

- From the menu bar of AD Organizer, select [View] > [Refresh].
- Press the [F5] key.

Precautions When Entering I/O Information in I/O Editors

In the Process I/O Editor or Communication I/O Editor of AD Organizer, if you copy an entire row of the process I/O list or the signal definition list and paste it to other row, the data in the Area column and P&ID Sheet column is not reflected in the destination cells. In such a case, select the entire row and paste it again. This time, the data is also copied to the Area column and P&ID Sheet column.

Precautions About Display in the Tag List Area

In the tag list area of the Control Logic Editor, if you click the [►] mark next to a tag name to expand or collapse the detailed definition items of a function block, information of other tag name that is displayed in the tag list area may disappear. To restore the disappeared information, follow either of these steps:

- rom the menu bar of AD Organizer, select [View] > [Refresh].
- Press the [F5] key.

Precautions When Adding Rows

In the table format editors of AD Organizer, you cannot add rows while the sorting function is applied. You must unsort the table and then add rows.

Precautions When Using the Dependency Analyzer

The following restrictions apply to the Dependency Analyzer:

- In Control Logic Dependency View, the FCS sequence library is not included in the scope of dependency analysis.
- In Logical Physical Relation View, FF-H1 engineering data is not included in the scope of dependency analysis.

In addition, the following restrictions apply to the display of Application Structure Path in Control Logic Dependency View and the Property View of control logics:

- If the same element is being referenced by multiple application modules, the path that is found in a search will be displayed for Application Structure Path.
- When an element of a station other than the FCS to which the application module is assigned is being referenced, the Application Structure Path remains blank.

Check the dependencies regarding elements by expanding the dependency tree in Control Logic Dependency View if necessary.

Precautions about the Delete Node of CAMS for HIS Alarm Builder

If you delete unwanted tags in AD Organizer, you must delete the remaining alarm definitions that are related to the deleted tags in the Delete node of the CAMS for HIS Alarm Builder.

Precautions about Module Rule Execution Sequence

When you execute module rules for each parameter, the module rules are executed in the following sequence based on the type of the rules:

1. Rules that do not reference other parameters or rules that reference the process I/O list, communication I/O list, or module properties
2. Rules on tag names
3. Other rules

When you define module rules, avoid hierarchical referencing relationship among the same type of rules, for example:

- The rules for parameter 1 reference parameter 2, and the rules for parameter 2 reference parameter 3.

If you define module rules in such hierarchical referencing relationship, the sequence of executing rules for parameters is indeterminate and thus you may not be able to obtain the intended result.

Precautions about the Number of Combinations of a Communication I/O Module and a Connected Device

If you run VP generation after adding or changing two or more combinations of a communication I/O module and a connected device at a time, the downloading to the second and subsequent modules will result in error A731 (IOM download in progress).

Example:

The error will result if you add or change the combinations "ALR111 and FA-M3" and "ALR121 and FA-M3" at a time. The error will not result if you add or change multiple instances of only one combination "ALR111 and FA-M3."

The corresponding builder file of System View is generated successfully even if error A731 results. You can restore the communication I/O modules that ended up in error A731 by running IOM download to them from System View.

Precautions When AD Organizer of R6.04 or Earlier Version Is Present in the System

When the system contains AD Organizer of R6.05 or later and AD Organizer of R6.04 or earlier, even though you change the Type of a reference tag by using the Control Logic Editor of R6.04 or earlier AD Organizer, the parameters of the reference tag will remain those for the Type before the change. When you edit a class module or an application module that was checked in in such a state by using AD Organizer of R6.05 or later, a warning message appears.

To restore a proper condition, change the Type of the reference tag in question by using the Control Logic Editor of R6.05 or later AD Organizer, configure the parameters for the Type after the change, and then check in.

In addition, if the reference tag of the class module or application module has annunciator message or operator guide message parameters, and if you edit them by using the Alarm Attribute Editor of R6.04 or earlier AD Organizer, the alarm attributes will revert to the default values.

To restore a proper condition, re-configure the alarm attributes by using the Alarm Attribute Editor of R6.05 or later AD Organizer and check in.

Alias statements in the expressions of CALCU and CALCU-C

If you save a CALCU or CALCU-C block with expressions containing no alias statements in AD Organizer and then add an alias statement to it, the added alias statement will not be displayed as a parameter in the tag list area of the Control Logic Editor.

So, when you need to add an alias statement to a CALCU or CALCU-C block with expressions containing no alias statements, delete the function block and create a new function block containing an alias statement.

Version of control logic in a class module

The version of control logic in a class module that is added in VP R6.06 or later is not displayed in AD Organizer in VP R6.05 or earlier. If you want to check the version of control logic, you must check it with AD Organizer in VP R6.06 or later.

Limitation on displaying the Module rule execution required icon

In a case of editing only an existing Process I/O List or the Communication I/O List in an upgraded AD project, the Module rule execution required icon does not appear on the I/O window if an update has not been performed for the application module with the Module Rule settings that refer to the I/O information of I/O List.

On the Control Logic Editor, if you edit an application module with the Module Rule settings that refer to the I/O information, the Module rule execution required icon appears properly.

1.1.8 HIS

Take notes of the followings for using HIS.

Precautions for Using Touch

You can use touch by connecting a monitor with touch capability although not all behaviors of touch are assured. Some object you touch may have limitations for some functions for example the right click menu does not appear or you cannot operate tool buttons. Please note those issues to use.

Sleep Button

A certain kinds of keyboard of general-purpose PC have sleep button (or standby button), however, this button should disable standby and hibernation options on Power Options of Windows. When the PC goes into sleep state, the power supplies to the hard disk and other main parts of the PC's hardware are restricted, the internal services such as trend data sampling and message collection cannot properly process. The malfunctions such as the HIS programs abort or the HIS cannot wake up from the sleep state may occur.

SEE ALSO For more information about disabling the sleep button of the keyboard, refer to:

B4.2, “Setting Up Windows” in CENTUM VP Installation (IM 33J01C10-01EN)

Behavior of Active Window

The following window behaviors may be seen on HIS:

- When you call up an operation and monitoring window, the window is not displayed in the foreground.
- The title bar of the active window is not highlighted properly.

In these cases, call up the window again or click in the window with the mouse.

Note on Tile Trend Display

You cannot use sub index marks in the Tile Trend Display.

Process Report Printout

When printing a process report (or a tag report), the columns next to the alarm column may not be completely printed out. This phenomenon is deeply dependent on the types of printer.

(Font size for printing (point) x Printer resolution (dpi))/144

If the above formula has a remainder, the accumulated error occurs. This error can be avoided by adjusting the font size on [Printer] tab of HIS Setup window.

If the process report (tag report) has user-defined items, and the paper orientation is set as Portrait, the user-defined items may be beyond the right edge of the paper. When this happens, change the paper orientation into Landscape. However, this phenomenon will not happen if no user-defined item is added to the report.

Backup HISSAVE.BAT File

If the HISSAVE.BAT file is modified for saving project, it is necessary to backup this file before upgrading HIS. After the HIS is upgraded, it is necessary to restore the HISSAVE.BAT file to the HIS. The path of HISSAVE.BAT file is as follows.

```
<CENTUM VP installed folder>\HIS\TOOL\HISSAVE.BAT
```

Dialog Message Initiated by SEBOL

If a dialog message is initiated by SEBOL, the message should not be erased after a data entry performed on HIS. SEBOL programs checks the data entered on HIS and initiates RetryDialogue if the SEBOL programs detected the entry is improper. The RetryDialogue initiated by SEBOL does not contain any message text but redisplay the previous message text.

If the previous message text is deleted or damaged, an error occurs for the RetryDialogue.

Cautions when Using [Show Desktop] Button

After installing Windows, Show Desktop button appears on the Start taskbar. Clicking [Show Desktop] button to display the contents of desktop may hide the System Message Banner.

If the system message view disappears, clicking the Show Desktop button again will recover it. It is recommended not to show the desktop, so that Show Desktop button should be removed from the taskbar by right clicking it and choosing [Delete] from the popup menu. Right click the Windows taskbar and choose [Toolbars], uncheck the items such as Quick Launch, can remove the desktop items from the taskbar.

Cautions on Password Control Setting is Common for Entire HIS

If all the following circumstances exist, the reconfirmation dialog box may be locked for a few seconds.

- When Password Control setting on Security Builder is set to Common.
- When the option of [Password required for confirmation] on the Security Policy Setting dialog box is validated.
- When Client for Microsoft Network is enabled on V net Properties.

When Password Control setting on Security Builder is set to Common, the following options on V net Properties should be disabled.

- Client for Microsoft Networks
- File and Printer Sharing for Microsoft Networks

Expanded Test Functions and CS 3000 HIS connected with CENTUM VP

You cannot use Expanded Test Functions from the CS 3000 HIS connected to the network with CENTUM VP because a project database converted to CENTUM VP cannot be opened from the CS 3000 System View or Virtual HIS Control Window and you cannot start Virtual HIS.

Mis-operation dialog box

The mis-operation dialog box called up from Graphic view, Trend view, or Custom Faceplate view is always shown in the main monitor.

Notes for saving files in HIS

In HIS, the following files can be saved.

If those files are shared among operators, save the files in folders under CENTUM VP Software folder or in folders created on a hard disk that are accessible by operators.

For the access permission of the created folders, add groups: CTM_PROCESS, CTM_MAINTENANCE, CTM_OPERATOR, and CTM_ENGINEER, and specify Full Control.

- Saved Trend Files and Reference Patterns
- Long-Term Data file
- File containing Historical Message Report
- HIS Setup Import / Export files

Restrictions on Non-WPF Controls (WPF: Windows Presentation Foundation)

The problem for displaying a Non-WPF (Windows Presentation Foundation) control beyond the window drawing area (Airspace issue) is basically solved. However, the following trivial problems are still unsolved.

- When scrolling the window, the instrument faceplate may temporarily flicker beyond the window frame.
- Due to accumulated error generated by calculating the pixels using both floating and integer numbers, the position may have one pixel difference.
- When using the user-created non-WPF control instead of the standard controls, the airspace issue may occur.
  This issue occurs when using a certain type Win32 GDI function directly for the settings. In this case, the .net class methods need to be changed to a control similar to a properties sheet. And then call the display again.

TIP Non-WPF controls here indicate the Active X controls and .NET components including instrument faceplate components, trend components, and message components and so on.

Note on Operation Keyboard Usage

If you disconnect and re-connect the USB cable of the operation keyboard while the operation and monitoring function is running, the following problems may occur:

- Entry operations do not succeed.
- LED lamps do not flash according to conditions.
- Buzzers do not sound.

To avoid these problems, log off the HIS before you re-connect the USB cable during replacement of a faulty operation keyboard or replacement to a different model, from AIP827 to AIP830, or when the cable was accidentally disconnected.

Notes on the Use of Operation Keyboard for Eight-Loop Simultaneous Operation Including Console-Type

The INC/DEC operation is unavailable with the operation keyboard for eight-loop simultaneous operation including the console-type HIS when the browser bar is pinned. When the browser bar is overlapping and hiding an instrument faceplate, the INC/DEC operation cannot be performed on the instrument faceplate.

Note for downloading Trend data acquisition settings

While the Trend data acquisition settings are being downloaded, if you make a setting in the Trend Pen Assignment dialog box in Trend view, in some cases HIS window freezes. To recover, restart HIS.

Defining Other Station Acquisition Trend

When you make settings for Other Station Acquisition Trend, specify in the [Other station name] box the computer name of HIS from which you want to acquire trend data.

Further, you must specify computer name, not station name.

Graphic Trend Component

On a graphic View, when using mouse to click a tuning trend of the trend component, and then the cursor position for key entries will be sent to the trend component. Consequently, the cursor cannot be moved to the touch targets and the push buttons. If only the touch targets and push buttons are selected, this phenomenon will not occur. In this case, you need to set the trend component to invalid on the graphic builder (uncheck the option) and then click a place other than the trend component.

Regarding HIS Trend View/Acquisition Pen Assignment

When the trend display pen assignment is changed on the pen assignment dialog box or on the acquisition pen assignment dialog box for a displayed HIS trend, the trend needs to be redisplayed (call the trend window again or click the trend display button on the toolbar). When redisplaying the trend, the trend title, trend pen name may show discrepancies from the actual settings. (For an example, this may happen in the case that you change the pen assignment to a different group on the same block).

Regarding Trend/Incorrect Index Label Display (When Rewinding)

For a trend display (either rotary or batch type), when rewinding the display to show the previously collected trend, the index labels other than the label for the current time may be abnormally displayed ("_" is displayed and the time display becomes incorrect). However, this phenomenon will not occur if the HIS is normally performing time synchronization.

When this phenomenon occurs, it can be recovered after a restart. For a rotary trend, do any of the followings can recover.

- Rewind the trend display to the time before the time that the trend sampling was started. Then this phenomenon will disappear. However, for a trend with 10 minutes sampling period, rewinding may go back for up to 20 days
- On the trend acquisition definition builder, change the trend sampling period (for an example, change the sampling period from 10 second to one minute) and then download the definition to HIS. And then change the definition back and then download the definition to the HIS again. However, this method will delete the trend data stored in the HIS, so that it is necessary to store the trend data to a file beforehand.

Notes on creating graphics

In CENTUM VP, component names used for graphics and syntax used for Modifier conditions are different from those in CENTUM CS 1000 / CS 3000. Therefore, same functions in CENTUM CS 1000 / CS 3000 and in CENTUM VP may be implemented slightly differently.

SEE ALSO For more information about syntax of expressions, refer to:

7.20, “Syntax of Expressions” in Engineering Reference Vol.2 (IM 33J10D11-01EN)

Notes on Graphics Display When the Revision of HIS is Old

Graphic views that contain newly added features may not be displayed properly on HIS if the revision of the HIS is older than the revision to which the features were added.

For example, graphic views containing the following features, which were added in R4.03.00, cannot be displayed properly on HIS of revisions older than R4.03.00.

- Product overview controls
- Data Character controls for which the [Count As Byte] check box is selected on the Data Character tab of the Data Character control properties dialog box
- Controls for which the [Treat As Character] check box is selected in the properties dialog box of the control
- Controls for which the [Display Cursor] check box is selected in the properties dialog box of the control
- Push buttons for which label text alignment is specified on the Push Button tab of the push button properties dialog box

Graphic views containing the following feature, which was added in R5.02.00, cannot be displayed properly on HIS of R4.03.00 or earlier revision.

- Tab controls

Window Mode and Full Screen Mode in Multiple-Monitor Environment

In a Multiple-Monitor environment with a Multiple-Monitor Support package, you have to specify the same operation screen mode (that is, window mode or full screen mode) to all monitors.

Restriction on Calling Up the Alarm Setpoint Difference Window in Multiple-Monitor Environment

When the Alarm Setpoint Difference Window is already displayed, if you call up the window with monitor number specified in function definition string or call up the window from the Plant Hierarchy display in the Browser bar on another monitor, the Alarm Setpoint Difference Window that is already displayed just comes to the foreground on the same monitor.

However, the contents displayed in the window are not affected.

Note that when you call up the Alarm Setpoint Difference Window while it is not displayed, the window is displayed on the specified monitor.

Use of Graphic Builder after changing Multiple-Monitor environment to single monitor

After you use the Graphic Builder in a Multiple-Monitor environment with a Multiple-Monitor Support package and change to a single-monitor environment, Properties sheet in the Graphic Builder may not appear. This is because the Graphic Builder stores for each user the position data (that is, coordinate data on a monitor) of the previously opened Properties sheet.

In this case, do one of the following to recover.

- Before you change the Multiple-Monitor environment to a single-monitor environment, start the Graphic Builder, open Properties sheet, and move the Properties sheet to anywhere on the primary monitor. After that, close the Graphic Builder and make settings for a single-monitor environment.
- In the user.config file stored in the following folder, set 0 to PropertyWindowTopPosition and PropertyWindowLeftPosition respectively.

  `<System drive name>:\Users\<Logon user name>\AppData\Local\Yokogawa_Electric_Corpora\Yokogawa.IA.iPCS.Platform[xxxxxxxx]\1.1.0.0`
  Example setting:

```
<setting name="PropertyWindowTopPosition" serializeAs="String">
        <value>0</value>
</setting>
<setting name="PropertyWindowLeftPosition" serializeAs="String">
        <value>0</value>
</setting>
```

Cautions on moving a view or window in the HIS that multiple monitors are used

- Windows 7 or Windows 10
- HIS uses multiple monitors
- CENTUM VP version is R5.01.00 or later

If all the above circumstances exist, when moving a view or a window to a position that overlaps the system message banner, the view or the window will be automatically moved away from the position to avoid overlapping the system message banner. When this phenomenon occurs, the window size may be changed.

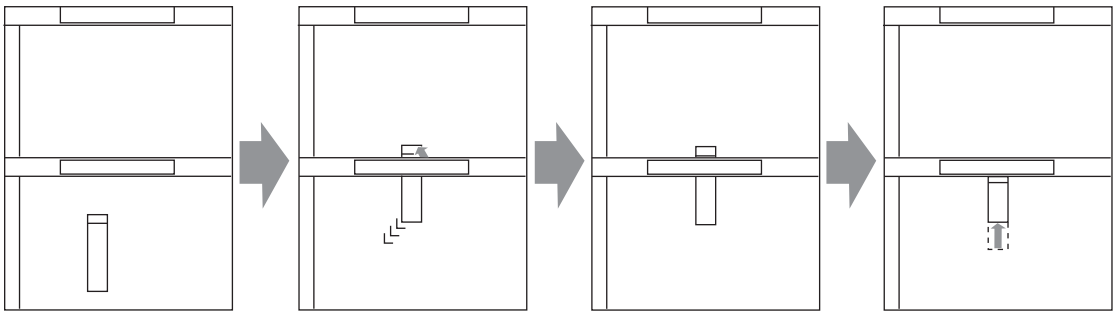

Figure 1.1.8-1 Adjustment of the window size

If the size of the view or window is adjustable, user can adjust the distorted window size.

If the size of the view or window is not adjustable, the buttons at the lower part of the view or window may not be used. In this case, you need to close the view or window and then open it again.

Window display position of interactive control in Graphic Builder

If you use Graphic Builder on a remote desktop client (including HIS-TSE client) and if you want to define the display position of interactive control (such as Push button and Touch target) in a window, type the values of the position in the dialog box.

You cannot auto-set the window display position by clicking the Specify Window Display Position button.

Debug function in CS 3000 Graphic Builder

CS 3000 Graphic Builder does not support debug function.

Behavior of View Control

If the view type of View control is set to Conditional Display, and in Full-Screen mode if a tab page to which the view control is assigned is behind another tab, the View control on the tab page does not function even if the conditions are met.

@Data in Graphic Builder

CENTUM VP does not support @Data. Use the Tag.Item format, as in CENTUM CS 3000 R3.

Use of @Property in Graphic Builder

If a generic name is specified for the parameter of @Property and the Initial Value of the generic name is undefined, graphic view displays ****** for the generic name.

Specifying Initial Values of Graphic generic names

There are two methods, global and local, to specify the Initial Value of Graphic generic names. In CENTUM CS 3000, if more than one generic name is used for one component, the method to specify Initial Values must be one of the two. In CENTUM VP, specification was changed to allow both global and local methods to be used for one component. However, R4.01.00 does not support it.

For example, suppose three generic names, $A, $B, and $C are used for one component, and if $B and $C are defined as local generic names, $A cannot be defined as a global generic name.

Therefore, use one method for one component, as in CENTUM CS 3000.

Character Display Format on Graphic Builder

The Date display format should not be used for the character displays.

Faceplate Block Button Cursor

If operation of a faceplate block is disabled (SWOP > 0) while the button of the faceplate block is focused with a cursor, the cursor (a green enclosure of the button) becomes hidden. You cannot operate the hidden cursor using arrow keys. A cursor will be shown when you click a component whose cursor focusing is enabled.

Acknowledgement Operation by the ACK Button in Graphic Views

On R4.01 to R4.03 graphic views, acknowledgement operation using the ACK button was done regardless of the acknowledgement range that is set on the HIS Constant Builder.

From R5.01, acknowledgement operation by the ACK button in graphic views is only available within the acknowledgement range set on the HIS Constant Builder.

Width of Double-Byte Space and Single-Byte Hyphen Characters

In an environment that uses .NET Framework 3.5 SP2 on Windows 7, if a double-byte space character is used in a graphic view, the width of the double-byte space character may be narrow, depending on the combination of characters.

Also note that, in a similar environment, if a single-byte hyphen is used after a double-byte character in a graphic view, the width of the single-byte hyphen becomes narrow.

There is possibility that character widths become narrow even for combinations other than double-byte space and single-byte hyphen. To avoid this problem, use single-byte space instead of double-byte space; or, use double-byte hyphen instead of single-byte hyphen to adjust the width.

Cautionary notes on font color

In a graphic view, if R6.06.00 or later is used, characters with white font color may be displayed in light colors except for white.

All the fonts on the following operating system environments may be subject to this phenomenon.

- Windows 10 Enterprise 2016 LTSB (64-bit)
- Windows 10 IoT Enterprise 2016 LTSB (64-bit)
- Windows Server 2016 Standard

Notice on Using Lower-Case letters for Window Call Command Parameters

The parameters of the command for calling windows assigned for push-buttons, touch targets and soft-keys can be specified as the initial values of the generic names. For an example, you can script a parameter like GR0001 {$A=abc}. In this case, even you use lower-case abc. When running the command, it will treat these letters as the upper-case

Notice on Defining Customized Faceplate on Graphic Builder

When defining a customized faceplate on graphic builder, the defined customized faceplate cannot be displayed on HIS. Therefore, you should not define the customized faceplate on the graphic builder.

Notices on Copying Graphic Files

If you copy thousands of graphic files on System View and paste the generated shortcuts, a confirmation dialog box is displayed. If you copy too many graphic files, other dialog boxes hide OK or Cancel and you cannot click them. You need to copy several times and you must not copy more than 1000 files at a time.

Notice on Defining Functions to Push Button, Touch Target and Soft-Key

When defining a function to the Push Button, Touch Target, Soft-Key and other components on the Function tab of graphic builder, the @InitialData() syntax cannot be directly used as a parameter. A generic name can be used as a parameter with the initial value obtained by @InitialData().

Regarding Graphic Builder/Push Button, Touch Target and Soft-key

When defining a parameter for the function of deleting a window on the designated monitor to a push button, touch target or soft-key, if a generic name is used, the key will not be functioning.

Favorites of Browser Bar

When the comment text of a window is changed, the shortcut text of the window in Favorites of Browser Bar will not be automatically changed. In this case, you can delete the shortcut from Favorites and add the shortcut to Favorites again.

System Message Banner/Always On Top

On "Taskbar and Start Menu Properties" dialog of Windows OS, if the option of "Keep the taskbar on top of other windows" is not checked, the System Message banner may be overlapped by other windows. For an example, when moving a message monitoring window or historical window on top of the taskbar, you may not able to click the taskbar. In this case, you need to check the option of "Keep the taskbar on top of other windows" on "Taskbar and Start Menu Properties" dialog.

Graphic Card

When the graphic card that does not satisfy the required performance, the contents may not be completely displayed.

Notice on Selection Area of Graphic Components

When a graphic component is moved to a different position according to the modifier conditions, the selection area to activate the tag object retains at the original position.

Call Data Input Dialog of Window Linked Function of Graphic View

When the Window Linked Function is used to call a data input dialog box at the timing of opening the graphic view, the data input dialog box appears for a very short moment and then disappears. The same phenomenon occurs when a menu dialog box or a data-item-dependent menu dialog box is called. A data input dialog box must be called by using a push button and similar objects.

Length of Parameter for Calling Graphic View/Window

When defining a function to call a window or a graphic for push button, the up to 48 byte of the parameter can be used.

For an example: for the function of GR0001{$TAG=FIC100}, the number of the characters enclosed between the pair of braces is the length of the parameter.

When Use Default Station Information is Checked for Name Entry of Browser Bar

If Use Default Station Information is checked for the Name Entry area of Browser Bar, when entering a tag number for calling a function block, the default project ID will be used; when entering an %xxxxxxx number for calling an element, the default project ID, domain number and station number will be used. However, the following points need to be put into the consideration:

- For a designated project ID, the other settings, (domains and stations) are become dependent, only the default settings can be used.
- Since designating the project ID, the other settings, (domains and stations) will become dependent, only the default settings can be used. In order to designate the other domains or stations, you need to uncheck the option of Use Default Station Information.
- The old type stations (CENTUM-XL, V) are not included in the list of stations. The domain that contains only the old type stations is not included in the list either.

Acknowledgement Button on Graphic Window

When a object on the graphic window is modified using a tag (function block)'s alarm status for blinking condition and the Screen Blinking is designated, when the object becomes blink,

clicking the acknowledgement button on the graphic window will stop the object blinking but the function block whose tag is used as the alarm source to modify the object will not stop blinking. Moreover, when a control group object is used in a graphic window and the Overview Blinking is designated, when the object becomes blink, clicking the acknowledgement button on the graphic window will stop the object blinking but the function block whose tag is used as the alarm source to modify the object will not stop blinking. When clicking the acknowledgement button on the following windows, the alarm source function blocks will stop blinking.

- Clicking the acknowledgement button on Overview window and the Control Group window, the annunciator and the tagged function block will stop blinking.
- Clicking the acknowledgement button on a function block faceplate, it will stop blinking.
- Clicking the acknowledgement button on Graphic window, the object that the Alarm Specific Blinking is designated, the alarm source function blocks used in the modifier will stop blinking.

Installation User of SOE Server

When performing the following operations, the same administrative user account should be used to perform the installation.

- Installing SQL Server
- Installing CENTUM VP Software
- Running IT Security Tool

The same administrative user account means to logon the local PC using an account with the privileges of administrators. (If the PC belongs to a workgroup, a same local administrative user account should be used; if the PC belongs to a domain, a same domain administrative account should be used.)

If the different accounts are used, Windows authentication may deny the accesses to SQL database from Microsoft SQL Management Studio or SOE packages.

Therefore, the following items should be noticed when performing installation.

- Workgroup Environment
  Use the same user account to install.
- Domain Environment
  Do not start installation as described in the instruction manual of instillation but put the PC as a domain member first, and then use the same user account (an administrative user account of the domain) to start installation. However, the domain server should not be used, but perform the installation as described for the instillation in the workgroup environment.

When installing to a PC in domain environment without using the domain serve as if to install to a PC in workgroup environment, the procedure is as follows:

- Outline of the procedure
  The first, to configure the PC of the SOE server PC into a workgroup environment and then change the PC to a domain environment after installation.

  The procedure by configuring the PC to the workgroup environment is procedure 1.

  Procedure 1: Configure the SOE server PC to a workgroup. And then using the same administrative user account to logon the PC to install SQL server and CENTUM software packages, and run the IT security tool.

  The procedures to change the PC from the workgroup environment to domain environment are procedure 2 to procedure 8.

  Procedure 2: Run IT security tool to change the model of security settings in the SOE server PC to legacy model.

Procedure 3: Set the SOE server PC as a domain member. And then logon the SOE server PC using a user account with the administrative privileges of the SOE server PC (the user account belongs to the CTM_MAINTENACE domain group).

Procedure 4: Create a "CTM_MAINTENANCE_LCL" user group on the SOE server PC, and put the local user who installs the SQL server to the user group.

Procedure 5: Add the domain user with the administrator privilege of SQL server to the CTM_MAINTENACE user group of the domain so as to grant the logon privilege to the user.

Procedure 6: Restart SQL server service.

Procedure 7: Logoff the SOE server, and then use the administrative user account added in Procedure 5 (the user account that belongs to CTM_MAINTENACE user group of the domain) to logon again. And then start IT Security Tool to configure the security settings in the domain environment.

Procedure 8: Restart the SOE server PC.

- Procedure 1 Details
  Refer to the instruction manuals and configure the SOE server PC to a workgroup environment. Make sure that the same administrative user account is used for installing the SQL server and the VP software packages, and running the IT security tool.
- Procedure 2 Details
  Use the IT security tool to change the security settings of the SOE server PC to "Legacy Model."
- Procedure 3 Details
  1. Put the PC to a domain.
  2. Logon the SOE server PC using an administrative domain user account.
- Procedure 4 Details
  Create a user group of "CTM_MAINTENANCE_LCL" from "Computer Management" in Control Panel; and then put the user who installs the SQL server to this local group.
- Procedure 5 Details (When Using a SQL Server Other than SQL Server 2005 Express)
  1. From Windows Start menu, start "Management Studio" a tool attached to the SQL server packages. Select "SQL Server Authentication" as the authentication method for connecting to the SQL server. And then use "sa" user to login the SQL server.
  2. Select "Security" - "Login" from "Object Explorer".
  3. Right-click "Login", and select "New login."
  4. On the dialyzed "Login-Create" dialog box, select an administrative domain user after clicking the Search button used for fining the login names.
  5. Select "Server Role" from page selection, check the "sysadmin" option of server role for the domain user group, and then click [OK] button to close the dialog box.
- Procedure 5 Details (When Using SQL Server 2005 Express)
  When SQL server 2005 Express is used, the "Management Studio" tool attached to the SQL server package cannot be used (It will not be installed either). Therefore, it is necessary to type queries on the command prompt window to configure the SQL server. The procedure for sending queries to SQL server is as follows:
  1. Edit the following text, and save it into a file.

```
CREATE LOGIN [<domain name>\<administrative domain user name>] FROM WINDOW
S
GO
```

```
sp_addsrvrolemember '<domain name>\<administrative domain user name>','sys
admin'
GO
Quit
```

The following is an instance where the domain name is Domain01 and the administrative domain user is ctmmnt.

```
CREATE LOGIN [Domain01\ctmmnt] FROM WINDOWS
GO
sp_addsrvrolemember 'Domain01\ctmmn','sysadmin'
GO
Quit
```

2. Use a domain administrative user account to login, and then open the Command Prompt window.
3. Type the following script on the Command Prompt window so as to run OSQL command while putting the above text file after the arguments of the command.
   For an example:

   ```
   Osql -E -i C:\MyFolder\MyScript.sql
   ```

   (Where C:\MyFolder\ is the absolute path and MyScript.sql is the file name.)
4. Confirm that the command was successfully executed without error.
   Type the following script on the Command Prompt window so as to confirm the previous execution of Osql command has successfully defined the settings.

   ```
   Osql -E [Enter]

   The command prompt will return the queries as follows
   1>select * from master..syslogins where name = '<domain name>\<administrat
   ive domain user name>'
   Then press [Enter] key. And then the following prompt returns.
   2>GO
   Press [Enter] key.

   When the above settings are confirmed, use the following command to check
   if they are registered as the roles of sysadmin.
   1>sp_helpsrvrolemember [Enter]
   2>GO [Enter]
   ```

Confirm that the correct server role is displayed in "Server Role" and the correct user account name is displayed in "MemberName." After confirmation, close the command prompt window and then go to procedure 6 to continue.

- Procedure 6 Details
  1. Right click the tree root displayed in "Object Explorer", select "Restart", and then reboot the SQL Server service.
  2. After restarting the service, click Refresh button on "Object Explorer" to refresh the display.
- Procedure 7 Details
  1. Logoff the SOE server.

2. Login the SOE server use the domain user account (a member of CTM_MAINTENACE user group of the domain) added to the SQL server in the procedure 5.
3. From Windows Start menu, choose "YOKOGAWA CENTUM" -> "[Maintenance]" -> "IT security tool" to setup the security settings of the domain environment.

- Procedure 8 Details
  Follow the instruction of the IT security tool to reboot the SOE server.

Plant Hierarchy

The UAID of each tagged function block or element can be manually changed on HIS so as to override the setting of Upper Equipment Name on the builder. In this case, an asterisk (*) should be entered to the [Upper Equipment Name] column on the builder of the function block or the element. However, if the asterisk (*) is not entered, the UAID data item of the function block or element should not be changed on the data entry dialog box of the function block or the element on HIS operator console. If the UAID of a function block or an element is changed on the HIS operator console, the function block or the element may fall beyond the security permitted scope (operation and monitoring scope) defined by the plant hierarchy settings. Consequently, the faceplate of the function block or the element may not be displayed and the alarms of the function block or element cannot be initiated.

If the above problem occurs, you need to save the tuning parameters of all the related FCSs that the UAID were changed and download the tag lists to the HIS, and then restart the HIS.

Yokogawa Icon

When upgrading a previous version to R4.02.30, the Yokogawa programs such as HIS Utility may be displayed with Yokogawa icons. In this case, use an administrative user account to logon the PC and then delete the following file. And then restart the PC.

```
%systemdrive%\User\<Logon User Name>\AppData\Local\IconCache.db
```

When Sheet-Link menu is disabled

Under the following circumstances, the Sheet-Link menu will be disabled thus the sheet-link will not be functioning.

- When selecting an element defined with user-defined label.
- When all the destination function blocks or elements called by sheet-link are either defined with the user-defined labels or existing in the current view.

Items cannot be displayed in Sheet-Link reference tag selection dialog box

Among the related reference function blocks and elements, the following items cannot be displayed in the Sheet-Link reference tag selection dialog box.

- Function blocks in the current view
- Elements defined with user-defined labels

Source of connection displayed on the window called through sheet-link

When a logic chart view is called through sheet-link, the function block or element where the logic chart view is called from will be displayed with an arrow type symbol.

However, if the following circumstances exist together, the arrow type symbol will not be displayed.

- If the function block is connected to the logic chart via an intermediate element.
- If the window is not called by sheet-link using an intermediate element but designed on the connected source function block.

To display the arrow type symbol when calling windows using sheet-link, you need to call the window from the intermediate element but not from the the function block.

Limitation on the Sound Output Device

When you select [Sound] for the Buzzer Switching option on the Buzzer tab of the HIS Setup window, the sound output device must be other than USB speakers (including AIP830 and AIP831).

Notes on AIP830 and AIP831 Operation Keyboards

- If you want alarm sounds to be output from the speaker of AIP830 or AIP831, select [Operation Keyboard] for the Buzzer Switching option on the Buzzer tab of the HIS Setup window.
- You must connect/disconnect AIP830 or AIP831 to/from HIS after HIS is logged off.
- After connecting AIP830 or AIP831, confirm that sound is output from it.

TIP Alarm output buttons for testing are provided on the Buzzer tab of the HIS Setup window.

Unavailability of IME on HIS

If you log on to HIS in Windows authentication mode on a Windows 7 or Windows Server 2008 R2 computer, you may not be able to use IME when you try to use the IME provided together with the OS. Specifically, when the Windows logon user and the user who logged on to CENTUM VP do not match, you cannot use IME in the windows listed below and the windows that are called up from these windows:

- Windows called up with function keys
- Windows called up with the following buttons on Browser Bar
  - [Builder]
  - [Drawing Builder]
  - [Recipe View]
  - [Logging Report Package]
  - [Active System View]
  - [Preset Menu]

To use IME, perform either of the following workarounds:

- The Windows logon user and the user who logged on to CENTUM VP must match. Follow these steps to match the logon users:
  1. Log out of Windows.
  2. Log on to Windows by using a user account having the rights to run the relevant CENTUM VP functions.
  3. Confirm that the Windows logon user and the user who logged on to CENTUM VP match.
  4. Run the functions.
- Install Microsoft Office IME 2010, and configure each user account so that Microsoft Office IME 2010 is used.

TIP

Microsoft Office 2013 does not contain IME. When using Microsoft Office 2013, perform the workaround of installing Microsoft Office IME 2010 as described above. For the conditions of application, refer to the information from Microsoft Corporation.

Double-width instrument faceplates in graphic views with control attribute

If an 8-loop graphic view with control attribute contains a mixture of single-width and double-width instrument faceplates, the single-width and double-width instrument faceplates may be displayed with different heights.

When a wide monitor is used, you can resolve this problem by setting the scaling mode to Free Scaling in the graphic file properties on the Graphic Builder.

In addition, if you repeat the Pan & Zoom operation in the graphic view, the difference in height between the single-width and double-width instrument faceplates may become larger. If this happens, you can work around the problem by re-displaying the graphic view.

Precautions for connecting a monitor to a computer

When you connect a monitor to a computer, you must use DVI cable.

If DVI cable connection is not available on the computer or the monitor, use a DVI converter along their connection path.

If only Display Port cable or HDMI cable is available for connection, adopt a display card driver with the capability of disabling the function for automatic adjustment of screen resolution and disable it to use.

If you use Display Port cable or HDMI cable to connect a display card and a monitor, OS considers that the monitor is removed when you turn off the monitor. As the result, the screen resolution may be lowered or the monitor layout may be changed. If such circumstances occur, the position of windows displayed in the screen moves. If you log off from the computer and log back on to it, the windows appear in the correct position.

TIP

Automatic adjustment of screen resolution is a feature of the Plug and Play. It automatically detects that a monitor is connected to the display card and adjusts to the optimum settings.

In general, this feature is enabled by default. To disable it, you must keep the EDID (Extended Display Identification Data) information unchanged by using the setup tool provided by the vendor of display card. For specific procedures, contact to the vendor of the graphics card.

If you add or delete a monitor after you disable the function to automatic adjustment of screen resolution, you must configure the settings again.

1.1.9 UACS Alarm Management

The UACS Alarm Management functions are not available in R6.07.00.

1.1.10 Consolidated Alarm Management Software

This section describes the cautions on using Consolidated Alarm Management Software.

Set HIS IP Address

When using a different Ethernet IP address for the HIS other than the default address (172.17.dd.ss), before enabling the CAMS for HIS, the IP address (including Host Name, IP Address and Subnet Mask) need to be defined to Ethernet TCP/IP Settings area on Network tab in HIS Properties sheet. And then download the new IP address settings together with all the contents of the Project Common to the HIS.

This setting is required by the virtual test environment of Expanded Test Functions for testing with multiple PCs. Under this circumstance, the actual IP address of the PC will be used as the IP address of the HIS and this IP address should be defined on the HIS Properties sheet of System View.

Actions on Breakage of Ethernet Connection

If the open bus (Ethernet) connection is broken during the operation, the equalization scope of CAMS for HIS will be divided into two segments. As long as the breakage of Ethernet connection is detected, the following system alarm messages will be sent from CAMS for HIS. The failure of the equalization will be notified to the users. However, the detection of the Ethernet breakage may take up to 10 minutes.

An example of alarm message: 172.17.1.64 has been disconnected from CAMS Equalization Scope.

Meaning: On the HIS that the system alarm is displayed, a message shows that the HIS with address of 172.17.1.64 was disconnected from the equalization scope. It may also mean that the HIS with the address of 172.17.1.64 was shutdown. Therefore, it is necessary to check the open bus communication status.

An example of recovery message: 172.17.1.64 has been connected with CAMS Equalization Scope.

Meaning: The connection of the HIS with address of 172.17.1.64 to the equalization scope recovered. It may also mean that the HIS with the address of 172.17.1.64 started.

The breakage of open bus will hamper setting via the download master HIS, the reception of OPC alarms, indication of alarm acknowledgement status, manual resets, suppression setting changes and the shelved alarms. Since the data are only equalized in the equalization scope and the data in the estranged HIS will be discrepant from other HISs.

Table 1.1.10-1 Discrepancies

Discrepancy	Executable Actions	After Recovery
Style Settings of CAMS for HIS Configurator	Downloading can be performed if download master HIS exists.	The discrepancies cannot recover automatically.
Settings of Message Monitor of CAMS for HIS Configurator	[Commit Changes] can be performed if download master HIS exists.	
Reception of OPC Alarms	[Reception of OPC Alarms] can be performed if the HIS connected with OPC server exists.	The absent messages during the breakage of open bus cannot be recovered though equalization. The discrepancies cannot be amended.

Continues on the next page

Table 1.1.10-1 Discrepancies (Table continued)

Discrepancy	Executable Actions	After Recovery
ACK Status of CENTUM VP Process Alarms	No affect to the acknowledgement of individual tags since the ACK is linked with the FCS alarm status. Temporarily affects the acknowledgement of individual alarms. When the ACK status of all the alarm items of the tag are estranged, the HIS will be equalized after recovery of connection.	
ACK Status of Other Alarms (System Alarm, Operator Guidance, Device Alarm and etc.)	ACK status becomes discrepant after acknowledgement action.	Cannot automatically recover. When the ACK status of all the alarm items are estranged, the HIS should be equalized after recovery of connection
Manual Reset	Manual reset status becomes discrepant after manual reset action.	Cannot automatically recover. When the manual reset status of all the alarm items are estranged, the HIS should be equalized after recovery of connection.
Suppression Status	Suppression status becomes discrepant after starting or ending suppressions.	Cannot automatically recover. When the suppression is started or ended after recovery of connection, the HIS will be equalized.
Shelved Alarm Status	Shelved alarm status becomes discrepant after starting or ending shelving.	Cannot automatically recover. When the shelving is started or ended after recovery of connection, the HIS will be equalized. The discrepancies may become unrecoverable if the affect is defined as [System], the recovery operation may become necessary.
Contents of Guidance	Contents of guidance becomes discrepant after editing the text file for guidance.	Cannot automatically recover. Save the text file again on the HIS where the text file was edited.

Procedure of Switching Projects in Virtual Test Environment

The database of CAMS for HIS is not managed under each project. In the virtual test environment, when switching from one project to another, the currently database used CAMS for HIS needs to be backed up before switching to a new project. After switching to a new project, the database of CAMS for HIS of the new project needs to be downloaded. The procedure of switching the project is shown as below. If the backup files of CAMS for HIS for the project to be switched to exist, the steps from 1 to 9 should be performed and then go directly to step 16. If the backup files of CAMS for HIS for the project to be switched to do not exist, the steps from 1 to 15 should be performed. However, this procedure is under the condition that the equalization scope of the CAMS for HIS is not changed.

IMPORTANT

Do not switch project on the HIS used for operating the actual plant.

1. If the virtual test or the virtual HIS is running, terminate it first.
2. Choose [Backup] from [Tools] menu of CAMS for HIS Configurator.
   The Backup/Restore dialog box appears.
3. Specify the path and the folder of the backup destination.
4. Click [Backup] button.
5. Open Command Prompt window, and type the following command to start CAMS for HIS Configurator with an argument.

<CENTUM VP Installed Folder>\CAMS\CAMSConfigurator.exe -D
(There is a space between exe and -D.)

6. Choose [Database All Delete] from the [Tools] menu of CAMS for HIS Configurator.
   The [Database All Delete] task will be available on the [Tools] menu after starting the configurator with -D argument.
7. Click [OK] button on the confirmation dialog box.
8. Click [OK] button on the dialog box for completing.
   Then the CAMS for HIS Configurator will be closed.
9. Change to a different project and then start HIS.
10. Start CAMS for HIS Configurator.
    If the database backup for the new project exists, go directly to step 16.
11. Choose [Import]-[Database of CENTUM VP] from [File] menu.
    The Import dialog box appears.
12. Click [Import] button on this dialog box.
13. Click [OK] button on the message box for completing import.
14. Choose [Download] from [File] menu.
    The dialog box of [Reason for the Change] appears.
15. Enter the text of the reason and then click [Download] button.
    The above steps are for changing the project by importing the CAMS for HIS database.

    The following steps from step 16 describe the procedure to restore the database when the CAMS for HIS database backup exists for the changed project.
16. Choose [Backup] from [Tools] menu.
17. Specify the path and the folder of the file to be restored at the field of [Backup Destination].
18. Click [Restore] button.
19. Choose [Download] from [File] menu.
    The dialog box of [Reason for the Change] appears.
20. Enter the text of the reason and then click [Download] button.
21. Restart the CAMS for HIS Configurator.

SEE ALSO For more information about the backup and restore procedure, refer to:

"■ Managing the Download History" in B1.5.2, "Roles of the Configurator of CAMS for HIS" in Consolidated Alarm Management Software Reference (IM 33J05A21-01EN)

■ Function block alarm status behavior while process alarm message omission occurs

When the consolidated alarm management is enabled, in the case that a process alarm message cannot be passed to HIS due to control bus failure, the alarm status of the corresponding function block may not be properly displayed in the time period between the recovery of the control bus and the recovery (NR) message of the function block is passed to HIS.

■ Manually Reset the Process Alarms Sent Through the OPC Server

The process alarm messages among the A&E messages sent from STARDOM or PRM through OPC server are permitted to be manually reset by privileged users except for S1 privileged users since the alarm messages sent through OPC server do not contain the recovery messages. However, for other process messages that the recovery messages are available,

this capability should not be used. Nevertheless, it is not necessary to set all the CENTUM VP process alarms as manually reset permitted. If a CENTUM VP process alarm is set as manually reset permitted and the alarm message is actually manually reset before the process alarm recovering, the discrepancy will occur between the Message Monitor of CAMS for HIS and the instrument faceplates and graphic views related to the process alarm.

Cautions when Using the Server for Remote Operation and Monitoring Functions (HIS-TSE)

When using HIS-TSE, the following cautions should be noticed:

- Call CAMS for HIS Message Monitor in Panel Mode
  The CAMS for HIS Message Monitor can be called by specifying a process view defined as a view in a graphic view, or by entering the view name with [.AL] to the Name Input dialog box after pressing the [Ctrl]+[Alt]+[N] keys together to call the name input dialog box.
- Alarm Status of Process Alarm, System Alarm and Operator Guide Views in Panel Mode
  In panel mode, the alarm statuses of Process Alarm view (.AL), System Alarm view (.SA) and Operator Guide view (.OG) cannot be shown.

Window size of CAMS for HIS Message Monitor

CAMS for HIS Message Monitor is always displayed in large size (-SL). Window size specified for calling the window is ignored.

Display HIS Historical Message Report Window

When try to display the historical message report window on the HIS that CAMS for HIS is running, the Historical Viewer of CAMS for HIS will be displayed instead of the HIS Historical Message Report Window. The HIS Historical Message Report Window can be displayed on the HIS that CAMS for HIS is running by defining the program on the preset menu.

An example is shown as follows:

Preset Menu

Function Type :	Execute the Program by File Name
Program name :	BKHHistView.exe

Notices on Searching in CAMS for HIS Historical Viewer

In an environment of multiple project connection, use following entry forms for your search.

- When you try to find a tag name of the current project in the state of having duplicated tag names:
  Entry form: Tag name of the current project

  You do not need to suffix the current project ID.
- When you try to find a tag name of other projects in the state of having duplicated tag names:
  Entry form: Tag name of other projects@ID of other projects
- When you try to search the entire plant hierarchy names of each project:
  Entry form: *@project ID

  A wildcard is specified to "*" for your search.

OPC A&E Alarm Occurrence Time When Running Function Check

When simulating alarms through the OPC A&E server, if the timestamps are vendor specific, the following points need to be noted.

The occurrence time of a simulated alarm is not the timestamp of real time; the occurrence time is generated in accordance with the specification of the scenario. This occurrence time will be displayed on the Configurator of CAMS for HIS (in Function Check Mode). For an example, the process alarms of STARDOM are EventAttributes2 and EventAttributes3 type alarms so that they are stamped with date and time in millisecond. In a scenario, if an alarm is looped or periodically used, the alarms with same occurrence time from the same occurrence source may repeat. Since CAMS for HIS can group the same alarms, on Message Monitor of CAMS for HIS, only one alarm is displayed to represent the multiple identical alarms. To avoid the above phenomenon, you need to create multiple scenarios for all the individual alarms with different timestamps.

Moreover, if the alarm occurrence time is specified as Vendor Specific, the time zone of the specified time will be the same as specified in vendor's OPC A&E interface.

For an example, in case of STARDOM, the time zone will become UTC(Coordinated Universal Time).

When OPC A&E Server Stops

When the OPC A&E server defined for connoting as the OPC A&E server of the CAMS for HIS stops, the OPC server communication failure event will be logged in the system logs and application logs in 2-minute period. The events will be kept in the logs. (*1)
If the situation prolongs, the system event log file will be fully occupied by the same error events and the important events will be buried by this flood or even fails to log the critical events.

In this case, you can either to increase the size of the log file or remove the OPC A&E server connection setting from the configuration when the server stop prolongs.

*1: Currently, the CAMS for HIS server only assumes that the failure of OPC A&E server is only a temporary failure for restarting, and expects the establish of reconnection within a short period.

Change Filter Attributes

The privilege of a user (operator) for changing the filter name, the filter icon and the filter description of the user filter created in configuration mode can be changed on the CAMS for HIS Message Monitor Definition Builder. To apply a security method for restricting the filter change in normal mode is also possible.

The filter created in normal mode is generally changeable in normal mode; the security method is not applied.

Guidance file in Function Check Mode

In function check mode, the result of editing Guidance file for an alarm cannot be set to the environment of the actual operation. In function check mode mode, copy the appropriate text file in the following folder and set the copied text file in the actual operation environment.

Folder location:

```
<CENTUM VP Installation top folder>\CAMS\TEST\database\httppost\
```

Plant Hierarchy Change of the Alarms Sent through OPC A&E Server

The CAMS for HIS is not designed for handling the plant hierarchy change of the alarms sent from the OPC A&E server.

When the plant hierarchy change occurred on the alarms sent from the OPC A&E server, the alarm before the hierarchy change and after the hierarchy change will be handled differently. If the alarms sent from OPC A&E server before the hierarchy change are leftover on the monitor after the hierarchy change, it is necessary to manual remove them from the display.

AVR10D Start Messages

After turning on the power supply to AVR10D, the initialization cold start message of AVR10D (No.0005) and the program copying to standby station message (No.0451) may be indicated with erroneous time stamp of 1970/01/01.

If these messages appear, acknowledgment (ACK) and manual reset operation need to be performed for these messages. When the power of AVR10D is turned off and on next time, the initialization cold start message (No.0005) and the program copying to standby station message (No.0451) will not be displayed as the new event messages.

Sharing the Operation results of the SIOS instrument tag alarm between projects

When you want to share the operation results of SIOS instrument tag alarm between projects, you need to select the "No identical tag names" option on multiple project connection builder.

Case where a changed plant hierarchy name is not reflected on the system alarm messages during their generation

Note that even if a plant hierarchy name is changed during generation of the following system alarm messages, the change is not reflected on the those messages. The change is reflected on the messages that are generated after the change.

Table 1.1.10-2 System Alarm Messages where the changed plant hierarchy name is not reflected during their generation

Message No.	Message Name
0189	SEBOL Internal Error
0191	SEBOL Error
0485	SFC block download error
0729	SFC block main program intermediate language downloading error information
0747	Notification of Failure to Load SEBOL Functions
4001 to 4021	Messages regarding Fieldbus Block
4023	Communication Error with Duplicate ALF111
4024	Communication Error with Duplicate ALF111 Recovered
4115, 4116, 4127, 4128, 4156, 4157, 4160, 4162, 4163, 4168, 4171, 4172, 4196, 4199	ProSafe-RS Messages

Message characters in Annunciator Message with data

For Annunciator Message with data, the detail of the supported print message (%PR) is output as an annunciator message. But the messages specified by the Annunciator Message builder are displayed as a message forcibly displayed when suppression is cancelled on CAMS for HIS message monitor or a message displayed when alarm status is corrected.

Shelving Operation in Environment where multiple revisions coexist

In the environment where HIS of R5.03.20 or later and HIS of a revision earlier than R5.03.20 coexist, it is necessary to cancel Shelving in HIS of a revision earlier than R5.03.20 first. The different process alarm messages are forcibly displayed between in HIS of R5.03.20 or later and HIS of a revision earlier than R5.03.20 when Suppression is cancelled. Therefore, even if Continuous Shelf is individually canceled, shelving for the corresponding messages cannot be cancelled in HIS of a revision earlier than R5.03.20.

Message generated when HIS is newly started in the environment where multiple revisions coexist

When on the CAMS for HIS message monitor of HIS of R5.03.20 or later, the process alarm message which is displayed when Suppression is cancelled and the process alarm messages which is displayed when AOF is cancelled are displayed, if HIS of a revision earlier than R5.03.20 is started, the above messages are displayed two by two on the CAMS for HIS message monitor of HIS of a revision earlier than R5.03.20. In this case, perform the confirmation operation in one of HIS. The extra messages are deleted.

Behaviors at canceling Suppression with locked type flashing alarm action

When a recovery is made during Suppression from the flashing alarm that has been caused before Suppression on the function block with locked type flashing action, the message is deleted from the CAMS for HIS message monitor and the flashing of the alarm display stops. However, when Suppression is canceled after that, the alarm display starts flashing. In such cases, check the state of the function block and then operate confirmations on Graphic View or Tuning View.

Precautions related to showing CAMS for HIS message monitor

If you set all plant hierarchies defined in projects by using Security Builder to connect multiple project, new messages may not be notified on CAMS for HIS message monitor for several minutes when you define an asterisk (`*`) and download the following information to HIS.

To avoid this instance, you must define a reserved word `ALL` instead of an asterisk (`*`).

- Definitions related to CAMS that are edited on builders such as CAMS for HIS Alarm Builder and CAMS for HIS Alarm Group Builder
- Definitions of plant hierarchy that are edited on builders such as Plant Hierarchy Builder and Control Drawing Builder
- Security definitions that are edited on builders such as Security Builder or HIS Constants Builder

1.1.11 Report Package

Cautions on using Report Package

Precautions When Starting Report Package by Using Microsoft Excel 2016

If you start Report Package in Excel 2016 environment, a dialog box may appear with the message “Failed to start Report Package. The process is terminated. Restart Report Package.”

If this dialog box appears, click [OK] button and close the dialog box. And then restart the Report Package.

Restrictions on the Name of Report Definition Files

Names of report definition files must not contain any string that is automatically converted by Excel, such as date and index. If a file name contains such string, the file name will be displayed with automatically converted string in the history management dialog box. In some cases, a file that has automatically converted string in its name and its subsequent files may not be displayed on the list. If you select a file name displayed with automatically converted string, you cannot reference, reprint, or delete it.

Setting the Date and Time Stamp Format for Messages

Even if you specify the format of date and time stamps of messages in the Format Design - MESSAGE.Topic dialog box, the specified format will not be reflected in reports. When you set the date and time stamp format, select a cell in the Excel worksheet where Access Date or Access Time is defined. Then, select [Format Cells] from the right-click menu, and select the format you want to apply or edit it.

Printout Report May Slacken Display

When printing out the reports, the CPU usage may go up to 99% by the Excel.exe. Window display may be slackened. Do the following may avoid slackening the window display.

1. Open the report file from the Report Package window.
2. The active cells should be enclosed in print area. And then check the printout using Page Break Preview to make sure that not active cell is falls beyond the print area.
3. Run [Load] from [File] menu after saving the changes.

Notes on Trend report and Daylight saving time in Report function

Report function may not provide proper Trend reports for 10 to 15 minutes before the start or end of daylight saving time. In such cases, configure the following registry settings:

`HKEY_LOCAL_MACHINE\SOFTWARE\YOKOGAWA\CS3K\HIS\OPC\OPCHDA`

Value name :	EnableNewTimeConv
Value type :	REG_DWORD
Value :	1 (System outputs correct Trend reports, unaffected by start or end of summer time.)

This registry settings adjust behaviors of HDA interface for HIS OPC to be the same as Report package at the start and end of daylight saving time. You must be careful for changing registry because it may affect the system.

Microsoft Excel 2010 Context Menu (Right Click Menu)

When you use Excel 2010 to edit the report files created in the environments prior to R4.02.30, the context menu does not appear and you cannot operate it. In such a case, use a ribbon menu to edit.

When you edit the report files created in the environments R4.02.30 or later, the context menu appears and you can operate it.

Window Switching with Microsoft Excel 2013

In an environment where Excel 2013 is used, do not switch windows by clicking the BKHRptIndex or Excel button on the task bar while a report definition file related dialog box is displayed. If you do so, the window that appears at the startup of the report function or an CENTUM Report window is displayed but you are unable to perform any operation in the window. Switch to the report definition file window and continue operation in the dialog box.

Exiting the Report Package with Microsoft Excel 2013

After you start the Report package, the Excel button is displayed on the task bar, indicating that the Report package is running. Do not use this button to exit the Report package when Excel 2013 is used. If you do so, the Report package may not end normally, causing a problem. When you exit the Report package, select [Exit of CENTUM Report] from the File menu.

Cautionary notes on printing reports to PDF files

If FDA: 21CFR Part11 is mandatory requirement, do not use functions except for the report function to create PDF files on a computer where reports are used.

On a computer where reports are used, if you print the results to PDF files by using functions except for report such as self-documentation, and then print a report to a PDF file, the report PDF file may not be properly saved. In the folder that the PDF was saved last time, the output file will be saved as the file name that was saved immediately before you print in PDF format.

This problem occurs only once if you print a report to PDF file after you create PDF files by using functions except for report function.

After this problem occurs once, report PDF files will be properly saved.

Examples of environments that this problem occurs and associated operations are describes as follows:

- In an environment that Report Package and system builders (ENG) run on the same computer, PDF files are printed by using self-documentation, and then a report PDF file is printed.
- In an environment that Report Package and Microsoft Office software run on the same computer, files are converted to, or saved in PDF format by using Word or Excel, and then a report PDF file is printed.

Monthly Reports when "(SKIP)" is Selected

In the case of monthly reports, if "(SKIP)" is defined in the detailed format design dialog box, "0" will be printed for the non-existing dates of the month (*1). This value of 0 affects the average, maximum, and minimum values that are calculated by the relevant functions of the Excel worksheet. Do not use "(SKIP)" if you include average, maximum, or minimum values in the report.

*1: Non-existing dates are the 31st for April, June, September, and November; the 29th, 30th, and 31st for February (30th and 31st if it is a leap year).

Report Functions (FDA:21 CFR Part 11 Compliant)

The name of the printer device [Adobe PDF] added after installing Adobe Acrobat for printing to PDF files should not be changed.

When the printer device name is changed, the report will be output through the default printer set in Windows operating environment.

Remark:

Report package will look for the printer device named [Adobe PDF] for outputting the reports to PDF files.

1.1.12 Long-Term Data Archive Package

Cautions on using Long-Term Data Archive Package

Changing Time Zone

When changing time zone, the long-term trend data archiving may stop. So that it is necessary to change the time zone with the following procedure.

Procedure:

1. If required, archive the objective blocks.
2. After archiving, change the storage age on System View into 0 day. Then download.
3. Wait for a few minutes, then change the time zone and restart the PC.
4. After the PC restarted, set the storage age on System View into the previous setting. Then download.

TIP

A few minutes indicate a time period vary with the number of files and the performance of the PC, roughly, three minutes.

Adjusting HIS Time

When adjusting HIS time, the long-term trend data archiving will not stop, but the archived data may be lost. If the time is adjusted backward, the previously stored data may be lost. The existing data files stamped with future times are deleted since the data files are treated as future data files. If adjusting the time backward only for a few minutes, this phenomenon does not occur. Moreover, adjusting time forward does not cause any problem.

Procedure:

1. If required, archive the objective blocks.
2. After archiving, change the storage age on System View into 0 day. Then download.
3. Wait for a few minutes, then adjust the time on HIS.
4. After the PC restarted, set the storage age on System View into the previous setting. Then download.

TIP

A few minutes indicate a time period vary with the number of files and the performance of the PC, roughly, three minutes.

1.1.13 SOE Server Configurator Package

Cautions on using SOE Server Configurator Package

Note on Using SOE Server Configurator

When you have changed settings by using the SOE server configurator, the changes will not take effect until the SOE server is restarted. Therefore, restart the SOE server computer after you change the message collection period or other SOE server settings.

1.1.14 Cautions Regarding to Console Type HIS

Cautions regarding to console type HIS are explained in this section. Unless it is specified, the cautions explained in this section are common to both Enclosed Display Console Type HIS and Open Display Console Type HIS. The operation keyboard described in this section referred to the operation keyboard connected to the serial communication port.

Rearrangement of Serial Port (COM Port) Numbers

The serial port numbers of console type HIS are rearranged. Normally the hardware of a standard PC is used as the kits of console type HIS. The two ports provided with the standard are excluded from the port number rearrangement. The rearranged port numbers vary with the number of ports in the standard PC. Refer to the following table and set the port numbers for connecting peripherals. There is no need to change physical connections but only change the software settings.

Table 1.1.14-1 Serial Port Numbers Correspond to Connected Devices

Number of COM ports on PC's Mainboard	UPS	Operation Keyboard	Touch Panel of Lower LCD	Touch Panel of Upper LCD
2 (Default)	COM3	COM4	COM5	COM6
1	COM2	COM3	COM4	COM5
0	COM1	COM2	COM3	COM4

For Open Display Style Console HIS, the COM port for upper LCD touch panel is not required so that that port can be left empty. User needs to follow the above table and change the COM port settings accordingly.

- Setting UPS COM port:
  The COM port setting can be changed on the setting dialog box in the software provided together with the UPS device.
- Setting the Operation Keyboard COM port:
  The COM port setting of OPKB can be changed using HIS Utility.
- Setting COM ports for Touch Panels :
  The COM port setting for Enclosed Display Style Console HIS can be changed using the following command.

  ```
  <CENTUM VP installed folder>\Program\BKHTchMntCmd.exe
  ```

  Command usage for displaying the current COM port number of lower LCD touch panel:

  ```
  BKHTchMntCmd -c 1 -m port
  ```

  Command usage for displaying the current COM port number of upper LCD touch panel:

  ```
  BKHTchMntCmd -c 2 -m port
  ```

  Command usage for setting the COM port number for lower LCD touch panel to COM4:

  ```
  BKHTchMntCmd -c 1 -m port -o COM4
  ```

  Command usage for setting the COM port number for upper LCD touch panel to COM5:

  ```
  BKHTchMntCmd -c 2 -m port -o COM5
  ```

  For Open Display Style Console HIS, the COM port settings are carried out on the setting windows of MonitorMouse.

■ COM Port Number in HIS (with Extended RS Card Installed)

The communication ports on RAS card for Operation Keyboard, touch screen and HIS status diagnosis signals are assigned with port numbers from COM3 to COM6. Nevertheless, if COM3 and COM4 are occupied by the extended RS card, the ports on Yokogawa RAS cards are assigned with COM5 to COM8, consequently, the above mentioned features do not function properly.

Resolution: Before you install Yokogawa RS-232C driver, use Device Manager to change the ports on extended RS card to COM7 and COM8. Thus, after you install Yokogawa RS-232C driver, the ports on the RAS card will be set as COM3 to COM6.

The procedure for using Device Manager is as follows:

1. Logon with administrator privilege on Windows PC.
2. On the context menu of [My Computer] icon, choose [Manage].
   Computer Management dialog box appears.
3. Choose [Device Manager], then double click [Ports(COM&LPT)].
4. Double click the line with ...(COM3).
   Its properties sheet appears.
5. Choose Port Settings tab and click the [Advanced] button.
6. Set COM7 to [COM Port Number], then click [OK].
7. It returns to properties sheet. Click [OK] to close it.
8. Do the same to the device that using COM4 to make the port into COM8.

■ COM Port Information on HIS Status Display View

The peripheral devices connected to COM ports of HIS such as serial printer can not be displayed on HIS status display window so that the connections of the ports can not be monitored. Even if the connections are indicated, the indicated devices connected may not be the real devices connected on the ports. (Since there is no common standard for the devices connected to COM ports, consoles may display the fixed device names designed for connecting the ports.) Up to now, the specification of HIS Status Display View can not solve the above mentioned discrepancies.

■ If Operation Keyboard is not Used [Open Display Console TypeHIS]

The serial port COM4 (default port for Operation Keyboard) is reserved for Operation Keyboard even when the Operation Keyboard is not used. Consequently a different device can not use this port. If an added device requires a serial port, the ports on main board (COM1 and COM2) can be used. If a device is connected to COM4, remove this device from COM4 and change the software setting of the device to a different serial port.

TIP

The Operation Keyboard port number may vary with the COM ports available on the PC's main board.

SEE ALSO

For more information about the details of COM port number, refer to:

"■ Rearrangement of Serial Port (COM Port) Numbers" on page 1-47

1.1.15 System Builders

Cautions on System Builders

Caution on opening a project

When using R5.01.20 or later builders to open a project created in R5.01.10 a message dialog will be displayed to prompt for upgrading the project. In this case, the version of the project may be displayed as R5.01.00 which is different from the real version number of the CENTUM project. However, this inconsistence does not cause any problem.

Cautions on Changing the Default Settings of Security Builder

Take note of the following when you upgrade CENTUM CS 3000 to CENTUM VP.

For the security builder with release number of CENTUM CS 3000 R2.23, R3.03 or later, the default setting of security level 5 for S1 privilege on the [Tag View] tab is changed from [N] to [Y].

When updating the projects created with the R3 version prior to R3.03 or R2 version prior to R2.23 to the new version later than R3.03, the existing setting will not be changed. When create a new project with the version newer than R3.03, the default setting will be the new one, i.e., the setting becomes [Y]. When this default setting is applied, the tuning view and the faceplate view of the function block that subjects to the security level 5 and S1 privilege will be monitored. This should be noticed when designing the HIS security scheme.

Precaution on changing project name

After changing the name of a project that all the HISs in the project are subjected to the common password control, the passwords of the project need to be initialized.
The following procedure can be used to initialize the passwords.

1. Open the Password tab on the project's Security builder, change the Password Control setting from Common to Local, and then, run Save or Download.
2. On the same Password tab on the project's Security builder, change back the Password Control setting from Local to Common, and then, run Save or Download.
3. For a current project, you need to register the passwords for different users accordingly.

CALCU Referencing the User-Defined Item of SFC blocks/UNIT instruments

Though according to the basic design, the user-defined data items in SFC blocks, UNIT instruments and operation instruments should not be referenced in a CALCU function block. Actually the user-defined data items can be referenced by CALCU and already implemented in certain projects. However, since the user-defined data items are not mapped as the fixed resource, when adding a new data item, or changing the array settings, the CALCU may loss the link to the referenced link after offline downloading. Since the function block CALCU may access a different data, the program may not function properly, so that it is very important not to reference the user-defined data item in CALCU. Nevertheless, the following resolution can avoid the problem if use CALCU to reference the user-defined data items in SFC blocks or UNIT instruments.

Resolution: Save the drawing that contains the user-defined data items of SFC blocks or UNIT instruments as a working file, then run [All Generation] for the whole FCS.

Data Exchange between CENTUM VP and SmartPlant Instrumentation

When exchanging data between CENTUM VP and SmartPlant Instrumentation, the data related to the engineering works without using the FF faceplate blocks are not supported. Therefore, you should use the FF function blocks when perform the engineering works.

Precautions on Importing Function Block Files while FCS is Online

On the function block builder (*1), when editing the builder files (*2)after importing the files, the edited files should not be downloaded online.
When the builder files are imported on the function block builder, the tuning parameters are also imported and can replace the existing tuning parameters.

If running online downloading after importing the files, the existing tuning parameters will be replaced by the tuning parameters of the imported files, thus the FCS performance may become unstable.

This type of phenomena mainly occurred under the circumstances of importing the builder files of the SFC blocks or UNIT instruments on the function block detail builder.

For an example, when the SFC block status is "RUN" in the imported file, while the in the status of the current block is "STOP." After editing the file and online downloading, the block will changed to "RUN."

*1: The control drawing builder, function block detail builder, and function block list builder are all referred to as Function Block Builder.
*2: The builder files are the ".edf" or ".sva" files.

Do the following may avoid the problem.

- Run All Generation
  With [All generation] the existing tuning parameters can be used after importing the function block files. On the setting dialog box, "Using Tuning Parameters from" item has two options, either [Master Project Database] or [Work File]. By default, the tuning parameters in master project database are used. Thus when importing function block files, the existing tuning parameters in the project database are used, the imported are ignored. The detailed procedure is to save the imported function block files as work files, then run [All Generation] after the above mentioned setting is confirmed.
- Importing Text Files on Function Block Detail Builder
  When importing text files on Function Block Detail Builder, the existing tuning parameters are not affected by importing.
- Refrain From Importing Files
  The above mentioned problem only comes together when importing function block files. Refrain from importing files, the problem will not occur. The function block configuration can be modified (without using Cut and Paste) directly on the function block builder, the existing tuning parameters are held after downloading.

Number of Copies

You can specify the number of copies on the Print Dialog, but only one copy is printed. Repeat print up to the number of copies you want, or make a copy of the printed.

Control Drawing Builder

Two dimensional array data connection can not be defined on the Control Drawing Builder.Define the connection on the Function Block Detail Builder.

Saving SVA in Control Drawing Builder

When you open a standalone file (file extension: sva) and save it, the last line (null) of the Overview Pane disappears, so you cannot insert a function block there. There is no way to avoid from this phenomenon. If you need to do that, add a function block from the Drawing Pane, or close the file once.

Restrictions on User-Defined Data Item Name

The names for the user-defined data items in SFC blocks or in unit instruments should not be identical to the terminals of the CENTUM VP function blocks. If the names are identical, the data of the items cannot be referenced or accessed for station links. (Originally, data reference and access were not supported by station links at all.)

Terminal names of CENTUM VP function blocks are as follows.

AIN, B01 to B10, BAI, BIN, CND1 to CND3, DIS1 to DIS4, FB, FF1, FF2, IL, IL1 to IL30, IN, IN01 to IN30, INL1, INL2, INT, J01 to J17, MVI, OSEL, OUT, OUT1, OUT2, Q01 to Q32, RFW1, RFW2, RL1, RL2, RS, RSTC, RSTI, SET, STB, SUB, SWI, SWP, TIN, TMI, TSI, TT

Notes on Errors Depending on Data Types of User-Definable Data Items

If user-definable data items in the following data types are used for the SFC block or the Unit instrument, the error from roundoffs should be taken into account in comparison or calculation of the data values, and application should be created accordingly.

- F32: Single precision floating-point (32 bits)
- F64: Double precision floating-point (64 bits)

With the user-definable data items in those data types, errors from roundoffs may occur in the following situations:

- When user-definable data items are changed
- When All Generation is executed
- When Generate is executed on multiple files

Compatibility Switch in Debug Mode

You can switch the behavior of graphic views by the setting on the Graphic tab in the project properties dialog box. In debug mode, however, the behavior of graphic views does not change even if you change this setting. Graphic views always behave in the ways when the check box is clear.

Precaution when using Find and Replace on Graphic Builder

When using Find and Replace on Graphic Builder, the texts of the following graphic objects cannot be found nor replaced.

- The label texts and functional texts of softkeys
- The functional texts for calling Views
- The legend names and axis labels of Two Dimension Graph, Step Graph, Line Segment Graph, Bar Graph, User Defined Line Segment Graph, and Radar Graph

ActiveX Control Object in the CS 3000 Graphic Builder

Note the following when embedding an ActiveX control object in the CS 3000 graphic view:

- Displaying the Properties of an ActiveX Control Object in the Graphic Builder may terminate the Graphic Builder.
- Confirm the operation of the control object before use. Note that the operation may be unstable depending on the PC environment.
- Save the control object before displaying its properties.

How to Confirm the Operation of an Control Object

1. In the environment that VC++6.0 is installed, choose [Microsoft Visual Studio 6.0] > [Microsoft Visual Studio 6.0 Tool] > [ActiveX Control Test Container] to start the program.
2. Click [Insert New Control] on [Edit] menu to select a control object.
3. Choose [Properties xxxx object] (xxxx stands for the name of the control object) on [Edit] menu.

However, on Graphic Builder, occasionally, the property sheets of some ActiveX Control objects are not properly displayed (or a part of property sheet is not properly displayed). When this phenomenon occurs, Visual Basic should be reinstalled. In certain circumstances, the redistributed VB libraries are also required.

Modify String of Graphic Text Control

When a character type process variable is used as the Modify String in the modifier of a graphic text control, when the modifier condition is established while the character type process variable is holding a null, the modified text will not change to null but retain the original text string.

ViewParameter and WindowParam of Graphic Interface Controls

Among the graphic interface controls, you cannot use ViewParameter (for .NET) and WindowParam (for ActiveX), which are the properties for acquiring the graphic view status.

If you wish to change the graphics processing according to the value of these properties, use generic names and the ChangeDataBindValue method to implement the same function.

Precautions for Zooming In/Out Graphics

When you zoom in or out graphics on graphic views or the graphic builder, the following elements of certain objects may not be displayed.

- Lines overlapping the cross-shape area that is made up of the horizontal and vertical center lines of the following objects: polylines, shapes created with the pen tool, fill areas, sectors with 270 degree central angle, and right-angle connectors
- Oblique lines that are almost horizontal or vertical

You can take the following measures to avoid this problem:

- Change the scale of zooming.
- Recreate polylines and right-angle connectors that are subjected to this problem by using line segments.
- Add another line on the disappearing line.
- If there are oblique lines that are almost horizontal or vertical, use grid to make them completely horizontal or vertical.

System Color Scheme Changed

In CENTUM CS 1000/CS 3000 R3.05 or earlier revisions, the system color scheme for setting colors from 0 to 7 are all black. In CENTUM VP, colors from 0 to 7 changed to various colors except for black.

Therefore, when you upgrade from CENTUM CS 1000/CS 3000 R3.05 or earlier revisions to CENTUM VP, the displayed colors may become different from the original colors.

For the project upgraded from CENTUM CS 1000/CS 3000 R3.06 or later revisions, it will have the same color scheme with CENTUM VP; there will be no color discrepancy problem.

SEE ALSO For more information about the color scheme and the system colors coded from 0 to 7 in CENTUM CS 1000/CS 3000 R3.06 and later version and in CENTUM VP, refer to:

7.22.1, “Mapping of Colors Used on CS 3000 Graphic Builder to CENTUM VP Colors” in Engineering Reference Vol.2 (IM 33J10D11-01EN)

When Gradient is Used for Color Change Modification

If the graphic file is created by CENTUM VP R4.01 and R4.02, and the gradient is used for color change modification, a diagonal line may be visible in CENTUM VP.

In this case, you need to redefine the color change modification on the graphic builder of CENTUM VP.

Changing a Station Model from EFCS to EFGW

Once a station number is defined as an EFCS, it should not be changed to EFGW. The EFGW changed from the FCS can not be properly monitored. After reconfiguration, it is necessary to do the following settings in all HIS stations so as to ensure the operation and monitoring in these HIS stations are running properly.

1. Delete the TFSTNddss.odb file in the `<CENTUM VP installed folder>\HIS\database\fcs`.
   Here, dd stands for the domain number of the EFGW, and ss stands for station number of the EFGW.
2. Reboot the PC (HIS).

Printing Graphic Builder Definitions Containing .NET Components or ActiveX Controls by Self-Documentation

When you use the self-documentation function to print out graphic builder definitions containing any .NET components or ActiveX controls, you need to print them out on a computer where the .NET components or ActiveX controls are installed.

Trend Acquisition Pen Assignment Builder (Cautions on the automatically created trend view)

Once the trend acquisition pen assignment file is defined, 16 trend views are created automatically. The automatically created views should not be removed. In case the views are removed, the trend display pen assignment files created later will be disordered. To prevent the above mentioned phenomenon, you should move, rename or create shortcut for the automatically created windows.

There are two methods for salvage. If you remove the automatically created views, you may carry out the salvage method on HIS or on System Builders.

- Carried out HIS:

Re-define the trend display pen assignment on HIS.

- Carried out on System Builders:
  n trend display pen assignment file's property sheet of System View, change the block numbers and group numbers.

Trend Acquisition Pen Assignment Builder (Cautions on the batch trend)

Batch trend closing function is not supported. Even though it can be defined on the builder but does not function. Do not define the batch trend closing on the builder.

Cautions when a Data Item is Assigned to a Trend

If the following data items of blocks such as YS blocks are assigned to trends, the high and low limits of the trends are displayed with errors since there are no default settings for the high and low limits. To prevent from this phenomenon, it is recommended to set high and low limits to the trends on the trend data acquisition pen assignment builder. The function blocks and the data items that most frequently assigned and most frequently generating errors are listed as follows.

- YS Blocks, PV
  SLCD, SLPC, SLMC, SMST-111, SMST-121, SMRT, SBSD, SLCC, SLBC, STLD
- Faceplate Blocks, PV
  INDST2, INDST3, HAST3, HASTPV, HAS3C, HASPVC (HAST3, HASTPV, HASPVC can be applied with CS only)
- Motor Control Blocks, FV (Feedback Variables)
  MC-2, MC-3
- BSETU-3, PV (Measured Flow Rate)
- SS-DUAL, SV (Not a Selectable Input)

Calling Up Trend Views Using Function Blocks

When using function block to call up trend views of different stations, the following operations are required. On trend assignment builder, open a function block of a different station, then download it. Or, perform HIS downloading on System View to the station to which the trend belongs.

Function Block Detail Builder

In Function Block Detail Builder, connection information can be entered using lowercase characters. After auto-wiring with lowercase characters, the entered lowercase characters are displayed in the control drawing. Though it does not harm, it is recommended to enter the connection information using uppercase characters in the Function Block Detail Builder. If the entered characters are lowercase character, change them into uppercase characters to restore.

Printing Tuning Parameters for Valve Pattern Monitor

Tuning parameters of valve pattern monitors can not be printed out.

Branch Wiring to Input3 Element

When a branch wiring connects more than two inputs, i.e. the input terminals from the 3rd input terminal are connected to the output elements directly, a compiling error occurs.
Example:

ERROR=04913: NOP Elements Generation Error

Adding a medium element and only using the input1 and input2 can avoid this problem.

Logic Chart Compiler

When an element located on column Z has an error, the error message of the compiler does not correctly indicate the location.
Example:

If an error occurs in the element located at Z01, the location in the compiler error message becomes @02.

Self Document Printing (1)

When Self Document Printing is performed in Print All mode, sometimes, the pages printed in the printer are in different order from the table of contents. Set the printer as follows may avoid the occurrence of this phenomenon.

- Resolution:
  In [Advanced] tab on the properties sheet of the printer, check the [Spool print documents so program finishes printing faster] and [Start printing after last page is spooled] options. With these settings, the printed pages will be in the correct order since all pages are spooled first before printing.

Self Document Printing (2)

If you set [Print by Date Between], previously save tuning parameters during the period specified by the [Print by Date Between], and run Self Document, the following two items also will be printed even if no engineering change is made to the items.

- FCS Properties
- Annunciator

Limitation on custom faceplates

Do not assign control keys (INC/DEC keys) to custom faceplates. If assigned, the system may not behave as intended when the control keys are operated.

Searching for a unit instrument that poses a tag name with more than 13 characters

If the tag name of a unit instrument has more than 13 characters and the unit instrument was generated in an environment prior R5.02, the unit instrument cannot be found when performing the flowing search operations:

- Printing the tags that crossly referenced across sheets
- Search by Name
- Reference All Elements/Tags

Nevertheless, when performing [Search for Related Tags] by selecting the unit instrument, the search operation will give no result.

1.1.16 Control Drawing Smart-Parts

Cautions on using Control Drawing Smart-Parts

Editing Using Control Drawing Smart-parts Editor (Function block in which no value is set to the following data items using Function Block Detail Builder)

The following items must be set in advance using Function Block Detail Builder. Otherwise, they are not displayed on the Control Drawing Smart-Parts Editor. Be sure to set the following before registering function blocks as a control drawing smart-part.

- The setting items in the Connection tab of Function Block Detail Builder
- "Data Item for Totalization" when input signal conversion for general-purpose calculation blocks is set to "Exact Totalization Pulse Train Input"
- "Alias" in the general-purpose calculation blocks
- "Condition signal/Action signal" in the sequence table block
- "Logic chart" in the logic chart block
- "SFC sequence" in SFC block or Operations
- "Unit procedure" in Unit instrument
- "Generic Name Definition" in Unit instrument

If you have registered as a control drawing smart-part before setting those data from the Function Block Detail Builder, start the Function Block Detail Builder via Control Drawing Builder from the Control Drawing Smart-Part Manager and do the settings.

SEE ALSO For more information about how to open the Control Drawing Builder from the Control Drawing Smart-Part Manager, refer to:

"● Editing with the Control Drawing Builder" in "■ Types of Methods to Edit a Control Drawing Smart-Part" in 6.4, "Editing the Control Drawing Smart-Parts" in Engineering Reference Vol.1 (IM 33J10D10-01EN)

Notice on Scan Period of Function Blocks in PFCS/SFCS/APCS

On the control drawing builder of PFCS/SFCS/APCS, only basic scan and high-speed scan can be specified. However, on Control Drawing Smart-Parts Editor, the medium-speed scan should be specified for the function blocks in PFCS/SFCS/APCS instead of high-speed scan. If the scan period of the function block is set to high-speed scan on Control Drawing Smart-Parts Editor, the scan period will be reverted to basic scan while updating the control drawing smart-part object. If the function block in a control drawing smart-part is set to high-speed scan, under the following circumstances, the scan period may be reverted to basic scan and the corresponding message will be displayed accordingly.

- When quoting a control drawing smart-part on a control drawing
- When updating the control drawing smart-part object on control drawing builder
- When updating all control drawing smart-parts on the Updating Control Drawing Smart-Parts dialog box

Cautions on Modifying Logic Chart Blocks (LC64) that Saved as Control Drawing Smart-Parts

When editing the control drawing smart-part on the Control Drawing Builder in the Smart-Part Editing mode, do not move the condition or action signal in the logic chart block to a different

position. If the condition signal or action signal in the logic chart block is moved to a different position and then the control drawing smart-part object is updated, the control drawing smart-part object will be overwritten but the information of the control drawing smart-part related to the moved signals will be discarded. If the control drawing smart-part is already overwritten, it is necessary to redefine the condition or action signal of the logic chart block on the Control Drawing Smart-parts Editor.

Notices on Automatic Tag Name Substitution when Updating Control Drawing Smart-Part Object

If you do not favorite by this kind of automatic substitution during updating of the smart-part object, you should not put the tag names as connection information in the control drawing smart-part.

If the tag names and the connection information are manually entered in the control drawing smart-part, when updating the control drawing smart-part object, the connection information and the tag names in the control drawing smart-part object will be automatically substituted accordingly. An instance is shown as follows:

- Create a function block with tag name A and a function block with tag name B.
- Manually enter the connection information of tag B block into tag A block and create a control drawing smart-part.
- When this control drawing smart-part is utilized, the tag name A is substituted by A1 and tag name B is substituted B1.
- After updating the control drawing smart-part object, the connection information in tag A will be applied to the tag A1 where the scripts regarding tag B will be substituted by tag B1.

Cautions on searching for related tags

To search for the function block included in a control drawing smart parts, you can select the function block on the list pane of the control drawing builder, and start the dialog box for searching the related tags while the selected function block is highlighted.

1.1.17 Test Function

Cautions on using Test Function

Testing a Loop that Contains YS Instrument

YS Instrument control loops can not be tested with Test Function. Thus, when performing target test on a loop that contains YS instrument, the actual YS device must be connected to the I/O module.

If the YS instruments are not connected or the test for other function blocks is affected by YS instruments in a virtual test, operate the data status by following these steps as an avoidance.

1. The YS blocks connected to YS instruments may indicate OOP/IOP/CNF alarm status. In this case, the test can be performed by temporarily segregating the inputs on the Control Drawing Builder.
2. The function blocks that are referring to the PV of YS blocks indicate IOP alarm status. In this case, take the step 1, and then clear all RAW data status of function blocks that refer to YS block by using the data set up window of test function.
3. The YS blocks that connected to YS instruments do not release from Cascade Open mode even when the connected YS instruments mode has been changed. In this case, removing the output connection of the YS block on the Control Drawing Builder may solve the problem.

Auto-Wiring Function

Auto-wiring function automatically wires the offsite instruments to pulse train (AnDrPs) input even when the offsite instrument is defined with analog input. To escape from this phenomenon, manually change the wiring type into analog wiring type such as DirAn or AnDrAn. A warning message may appear, the message may be ignored.

Exiting Test Function

Under certain circumstances, during the starting of Test Function, clicking the [X] button may not end Test Function. (During the Test Function Starting, when you activate a window other than Test Function, then return to the Test Function window, a button for exiting Test Function becomes available.) To escape from this phenomenon, do not quit from Test Function during the Test Function starting. When the Test Function window does not close, restart the PC.

Logging Off when Running Test Function

Do not log off when Test Function is running. If a user logs off while the test function is running, when the user logs on at next time, the virtual HIS starts up instead of target HIS. It is necessary to close all the windows of Test Function before logging off. If virtual HIS starts up after logging, restart the PC.

Cautions on Simulating Data Access of Other Stations

Due to simulation environment problem, when simulating the data access of other stations, the simulator cannot check if the tag names on the destination ADL block are correct or incorrect. When performing communication test, the main window of Test Functions will stop simulating the data access with Other-Station Communication Reception function. The checks should be performed on the communicated destination FCS or SCS simulators.

Wiring SIO for Testing

When wiring SIO (%Y elements of FCS-UG) for testing and you wire all the 32 channels together, the wiring cannot be properly established. Wiring 16 channels together will be all right.

Changing Scan Period Magnification in Target Tests

In target tests of FFCS-V, you cannot change the scan period magnification setting. However, you can change it in virtual test mode.

Scan Transmission Between Virtual Domains in Virtual Tests

In virtual tests, scan transmission is not available between virtual domains. Scan transmission is available within a domain.

When you perform virtual tests of scan transmission, you need to disconnect the global switch (%GS) communication while testing.

Disconnection of Communication I/O

Do not add or delete communication I/Os while communication I/Os are disconnected. When you add or delete communication I/Os, cancel the disconnection first, add or delete communication I/Os, then disconnect the communication I/Os again.

If you add or delete communication I/Os while disconnected, the disconnection status may remain. If the status remains, cancel the disconnection of the communication I/Os.

This problem occurs in the following cases:

- If communication I/O definition is deleted while disconnected and another communication I/O definition is added in the same location, it is added as being disconnected.
- If a communication I/O area definition is deleted while disconnected, the disconnection status of the communication I/Os allocated to the areas following the deleted area may be changed.
- If a communication I/O area definition is added while disconnected, the disconnection status of the communication I/Os allocated to the areas following the added area may be changed.

I/O Disconnect Function

For FCS other than FFCS-V, do not delete input/output modules by online maintenance while I/Os are disconnected from them. When you delete input/output modules with disconnected I/Os, cancel the disconnection and then delete them.

If you delete an input/output module by online maintenance while its I/Os are disconnected, the disconnection status remains and the input/output module defined anew for the slot in which the deleted module was installed becomes I/O disconnected. If this happens, cancel the I/O disconnection of the added input/output module.

1.1.18 FCS

Cautions on FCS

FCS CPU Idle Time

The CPU usage varies with the FCS tasks such as communication with HIS or supervisory computer, online maintenance or All Parameter Copy (APC) of dual-redundant schemes so that the CPU load subjects to the various factors. Considering that the CPU usage may increase for system expansion, sufficient CPU idle time should be guaranteed. For routine FCS operations, the following CPU idle time of the FCS should be used as reference:

- Reference CPU Idle Time:
  - For AFF50D /AFV10D: 20 Seconds
  - For other types of FCS: 10 Seconds

IMPORTANT

To prevent shortage of CPU idle time, you must adjust the number of HIS that runs operation and monitoring for the FCS and the number of reference tags that are referenced at a time.

Cautions on Replacing CPU Card of FCS, ACG and BCV

If the CPU Card of FCS, ACG and BCV need to be replaced with a new one, it is necessary to contact to the nearest Yokogawa service agent. The procedure for replacing CPU card is complicated especially when replacing CP333 card with CP345 card.

SEBOL

If the functions (lreadpara, dreadpara, creadpara) for acquiring signal parameters are used in a command script in which the data of different station are acquired, the SEBOL internal error (-25147) occurs. In this situation, split it into two scripts can avoid this phenomenon.

A local variable can be used in the command script to replace the function (lreadpara, dreadpara, creadpara) for acquiring signal parameters.

Example: To avoid nRtn = (creadpara(0) == "PAUS") and (OTUNIT.DATA == 1)
Use the following script instead.

```
char*16 sPara ! Declare a local variable for acquiring signal pa
rameters.

sPara = creadpara(0) ! Set the local parameter value into the lo
cal variable.

nRtn = (sPara == "PAUS") and (OTUNIT.DATA == 1) ! Execution
```

I/O Disconnection/Connection

I/O disconnection (disconnecting all I/Os, disconnecting an I/O unit, disconnecting an I/O module) is used for carrying out FCS comprehensive test by testing the wired I/Os and the not wired I/Os together. If FCS is running, the comprehensive test may not behave properly.

So that

- Do not perform I/O disconnection when the FCS is running.
- After I/O connection, the FCS needs to be restarted before operation starts.

- For dual-redundantly configured I/O, the I/O on the active module and on the standby module should be disconnected and connected together.

When disconnecting or reconnecting I/Os, the following operations are performed.

- When disconnecting I/Os, the status inputs and analog inputs are all initialized to zero.
- When disconnecting I/Os, some of the push-button inputs may be at ON position. This phenomenon occurs when disconnecting the I/O while the input is physically at ON position.
- When disconnecting I/Os, some of the pulse inputs may become strange. This phenomenon occurs when disconnecting the I/O while the pulse input is physically processing.
- When disconnecting all I/Os and a momentary power failure occurs, data status of the pulse inputs may become NRDY and maintain to this status. Thus the input PV become frozen cannot be updated. So that for testing momentary power failure, do not disconnect all I/Os but the individual I/Os.
- The output tracking and the equalization between I/O modules and I/O images in FCS are not performed when reconnecting the disconnected I/Os. The discrepancies between the FCS I/O images and the real I/O status may cause output bump.

Flag of Momentary Power Failure

When a very short time power failure occurs in FCS, the value of system common switch for a momentary or sustained power failure may become 0 (indicating a sustained power failure) even though a momentary power failure occurs.

A momentary power failure mentioned here does not cause CPU stop although decrease of voltage is detected. Generally, an AC (100 V / 200 V) power supply fails for 20 to 60 ms or a DC (24 V) power supply fails for 2 to 500 ms (varies with the load) is treated as this kind of power failure. When power supply fails for more than one second, the CPU will stop. The phenomenon does not occur under this circumstance.

Element number of system common switch for a momentary or sustained power failure varies depending on the type of FCS.

- %SW80007 for FFCS-C, FFCS-V or FFCS-R
- %SW0007 for FCS except for FFCS-C, FFCS-V or FFCS-R

The power recovery runs correctly depending on the duration of power failure. This phenomenon also occurs. So for, there is not way to avoid this phenomenon.

Subsystem Communication

In the cable for connecting ALR111, the signal wires of SD and RD should be twisted with signal ground wires. Otherwise, the LED for RD may blink even when the cable is disconnected from the destination device. It is recommended to use the dedicated cable provided by Yokogawa.

SFC Blocks

If sequence table one-shot execution is used in the step of preprocessing for status change of an SFC block, whether the status change is possible or not cannot be determined correctly by the sequence table.

To implement correct determination by a sequence table, create the preprocessing for status change as SEBOL one-shot execution, instead of sequence table one-shot execution, and use sequence table one-shot execution in the SEBOL program.

Example of description:

```
block ST16 ST01RB
integer permitted

seqtable oneshot ST01RB; permitted
return permitted
```

Offline Load Function

With KFCS/RFCS2, if you power off an I/O node and power it on again while the CPU of the FCS is stopped (including the case when FCU is powered off) and then perform offline loading to the FCS, the ALR111/ALR121/ALE111 modules in the I/O node you powered off and on fail (configuration error) and start up normally.

Turbine Controller

With FFCS/FFCS-L/FFCS-V/KFCS2/RFCS5, if you perform one of the following online maintenance tasks for dual-redundantly configured AGP813 (Turbine Protection Module), Fail/Recover messages are generated for the AGP813 that is installed in the odd-numbered slot immediately after the online maintenance. In addition, if the AGP813 in the odd-numbered slot was controlling, the control right is transferred to the AGP813 in the even-numbered slot after the online maintenance.

- Online change the start mode setting from Instantaneous Mode to Waiting Mode in the Set details tab of the IOM properties.
- Perform an online change while the start mode is set to Waiting Mode in the Set details tab of the IOM properties, the AGP813 in the odd-numbered slot is controlling, and the logic enable is set to ON.
- Perform an online change while the start mode is set to Waiting Mode in the Set details tab of the IOM properties and the AGP813 in the even-numbered slot is controlling.

Online Maintenance

With FFCS-V, if you add an I/O node by online maintenance while the momentary power failure tolerant time is set to 0 second, Fail/Recover messages are generated for the added node. To avoid this, set a value greater than 0 second for the momentary power failure tolerant time.

Notices on HART Communications

For the devices linked through the HART communication, the proper tight-shut values should be set according to the specification (*1) of the device. The default tight-shut value (1.25 mA) may fall beyond the scope that the HART communication supported for the device.

*1: Varies with power supply specifications of the devices, HART communication corresponding to the signal scopes are different. A proper tight-shut value should be set after confirming the actual specification of the device.

Cautions on Inhibiting IOP Reactions

When IOP reactions are inhibited, when an input open alarm occurs, the data status signal will not be attached to the datum. Not only the status signal of BAD (indicating bad value) but also the status signals of IOP+ (positive input open) and IOP- (negative input open) will not be attached to the datum. However, the status signals not originated from process (NFP) are not affected. Consequently, the data quality indicator for the closing data sampled by HIS and Exaopc data acquisition programs will become [QUESTIONABLE] (*1). Therefore, when data quality signal is used as a condition signal in a sequence table or other programs, the above phenomenon should be put into consideration.

Moreover, for the datum directly connected to a function block as a reference datum, the data status will be QST (questionable) status, which has no affect to the control actions.

*1: The data quality code is activated as a default feature of Exaopc.

Regarding CENTUM-XL Migration

When "CENTUM-XL Compatible IOP Action" option is checked and "Input Open Alarm" is defined with "NO," the data status will always be NR (normal). For the applications that the data status is required such as closing processes for data acquisition, the function block that the "Input Open Alarm" is positively defined should be used.

Precautions on Adding RIO Nodes

Upon adding an RIO I/O node, the RIO bus master interface card (RB301) may fail and control right switches over to the RB301. As a result, control right of CPU switches over.

Conditions of occurrence:

This problem can occur in a system using RIO bus, depending on the timing of online maintenance that involves RIO node addition.

It does not occur when the node is added with an address consecutive to the address of the existing node.

It becomes more likely to occur if the node is added with an address not consecutive to the address of the existing node.

Impact on the plant:

- Dual-redundant system
  Even if this incident occurs when adding a node, control right transfer of CPU cards occurs but no impact is caused on the plant control.

  A message of CPU switching is generated and both the RB301 and CPU cards recover automatically.

  [Generated messages]

  ```
  FCS*** LEFT (or RIGHT) Fail (RESTART Code= 40B8 2512 0000 0000)

  FCS*** Control Transfer

  FCS*** RIGHT (or LEFT) Control
  ```

  You do not need to perform the loading again to add the node.
- Non-redundant system
  If this incident occurs when adding a node, the RB301 card fails and then starts up again. The CPU card does not fail but a MAN fall-back occurs in the function blocks connected to the I/O because all the RIO-related components become abnormal.

Workaround:

When you add an RIO I/O node, always create a node with a node number consecutive to the number of the node that is already defined.

(Example 1) If only node 1 is already defined, add a node as node 2.

(Example 2) If nodes 1, 4, and 5 are already defined, add a node as node 2 or node 6.

Power Supply Error Messages for CPU Nodes

If node 1 of FFCS, FFCS-S or FFCS-V is not defined, a power supply error message will not be generated for node 1 (CPU node). However, the station status display of HIS shows the correct status.

Even if no input/output modules are defined, power supply error messages are generated properly when node 1 is defined.

System Function Blocks

With FFCS-V, do not access data item MRGE of system function block FCS_CPU because it does not show the correct value.

Cumulative Deviation Alarm Check of Blending PI Controller Block (PI-BLEND)

The following behavior of PI-BLEND, which was seen in versions earlier than R5.04, has been resolved:

- If the cumulative deviation alarm setpoint (DL) is set to a value that is equal to or greater than the PV range span (SH - SL), the cumulative deviation alarm check does not work.

To enable the revised behavior, perform offline downloading to FCS after the installation of R5.04.

Cautionary Note when the Start Condition of FCS is Set to AUTO (Restart)

This cautionary note applies to following types of FCS that use FIO.

- KFCS
- KFCS2
- RFCS2
- RFCS5
- FFCS
- FFCS-S

Follow these steps to replace a redundant I/O module with other I/O module in FCS whose start condition is set to AUTO (Restart) during a planned system power interruption.

1. Operate either of following steps:
   - Turn off the power to the node unit.
   - Remove the I/O module you are going to replace.
2. Turn off the power to the FCU.
3. After you replace the I/O module, turn on the power to the FCU, and then download the configuration data.

If you do not perform these steps and replace a redundant I/O module while the FCS is not powered, the standby I/O module will not start normally even though you online-download the configuration data after power recovery. In this case, remove and insert the module or run off-line downloading to the FCS. The standby I/O module starts.

Cautionary Notes when Connecting N-ESB Bus Module and FieldMate Validator

Before you perform maintenance works by using FieldMate Validator, you must connect the N-ESB bus module and the computer where FieldMate Validator is installed with a USB cable, start FieldMate Validator, and confirm that the MAINT lamp is lit on both N-ESB bus modules.

If the maintenance port of either redundant N-ESB bus modules is disabled, the N-ESB bus module with disabled maintenance port will not enter maintenance mode when you try to

place the N-ESB bus modules into maintenance mode from FieldMate Validator. If you perform the maintenance work in this condition, the I/O modules cannot receive data from FieldMate Validator correctly, resulting in unstable behavior. In this case, follow these steps to place the NESB bus modules in maintenance mode:

1. Disconnect the USB cable from the N-ESB bus module.
2. On HIS, use the N-IO Node Security Tool to enable the maintenance port of both N-ESB bus modules.
3. Connect again the N-ESB bus module and the computer where FieldMate Validator is installed, start FieldMate Validator, and confirm that the MAINT lamp is lit on both N-ESB bus modules.

Also note that you must not remove and insert the N-ESB bus module while the module is in maintenance mode. Before you remove and insert the N-ESB bus module, disconnect the computer from the maintenance port.

Output range tracking of BSETU-2/BSETU-3 blocks

Function Block Reference Vol. 1 (IM 33J15A30-01EN) contains an error about output range tracking of BSETU-2/BSETU-3 blocks. The correct information is that output range tracking is available with BSETU-2/BSETU-3 blocks.

Behaviors of inter-station data link

On a control station that has definition of inter-station data links with stations (FCS, APCS, GSGW, UGS, UGS2, and SCS) in other domains, the data update of inter-station data links may be suspended for 20 seconds if a data-link destination station in another domain fails.

To deal with this concern, use the SEBOL assignment statement instead of the inter-station data link block on applications that has risks resulting from the 20-second suspension of data update. To replace inter-station data links with SEBOL, you must create SFC blocks for each data-link destination station.

TIP

- In addition to the inter-station data links with the failed station, the suspension of data update may also occur for the inter-station data links with the other unfailed stations in different domains or in the local domain.
- Data update is not always suspended for all the inter-station data links on a control station that inter-station data links are defined.
- The data update is not suspended if a data-link destination station in the local domain fails.
- The suspension of data update occurs only once with each fail of a data-link destination station in other domains.
- During a 20-second suspension of data update, the alarm status does not become IOP or OOP for the function blocks that perform inter-station data link.
- After a 20-second suspension of data update, the alarm status becomes IOP or OOP for the function blocks that perform inter-station data link with the failed destination station.

1.1.19 GSGW/APCS

Cautions on GSGW and APCS

GSGW/APCS CPU Processing Time

GSGW and APCS are working in Windows environment. Therefore, the basic control activities of GSGW or APCS are sharing the CPU usage with other processes in the same PC.

If the load of CPU usage is too high that the basic control activities of GSGW or APCS cannot complete scanning all the function blocks within 4 seconds, a system alarm of Too Heavy Load will be output to indicate the that the periodic execution encounters heavy load. Since Windows environment does not guarantee the real-time activities, when encounters heavy load, even though the CPU usage is less than 100%, the basic control activities of GSGW or APCS cannot be completed. Consequently, the system alarm of Too Heavy Load will be output PC. For the PC of GSGW or APCS, it is recommended to inhibit the total CPU usage for other processes within 50%.

Shutdown Operation

If you shut down the computer while GSGW/APCS is running in it, restart of APCS/GSGW from HIS may fail. To restore, offline downloading is required.

This may occur on computers running Windows 7 (GSGW) or Windows Server 2008 (GSGW/APCS).

If required, run offline downloading from a computer installed with system builders. Tuning parameters that are not saved will be lost by the offline downloading. Be sure to save tuning parameters when you have changed any tuning parameters while GSGW/APCS is running.

Workaround:

When you shut down a GSGW/APCS computer, stop the GSGW/APCS from an HIS and shut down the computer after making sure that the GSGW/APCS has stopped.

Follow these steps to shut down a GSGW/APCS computer:

1. From the System Status Overview of HIS, select the APCS/GSGW station.
   The APCS/GSGW Station Status Display View is displayed.

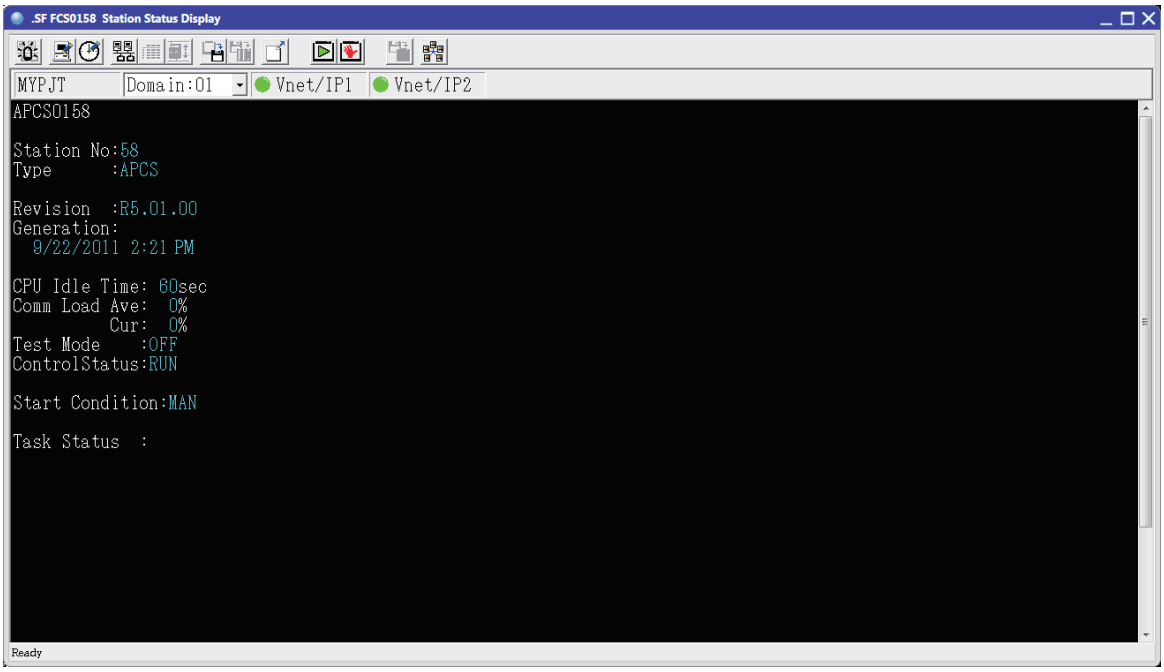

Figure 1.1.19-1 Example of APCS/GSGW Station Status Display View

2. Click the [Stop] button in the upper part of the Status Display View.
   A confirmation dialog box for stopping the APCS/GSGW is displayed.

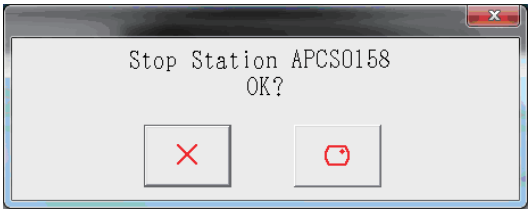

Figure 1.1.19-2 Example of Confirmation Dialog Box

3. Click the [Execute] button on the confirmation dialog box.
   The APCS/GSGW stops.

4. In the APCS/GSGW Station Status Display View, make sure that the APCS/GSGW has stopped.

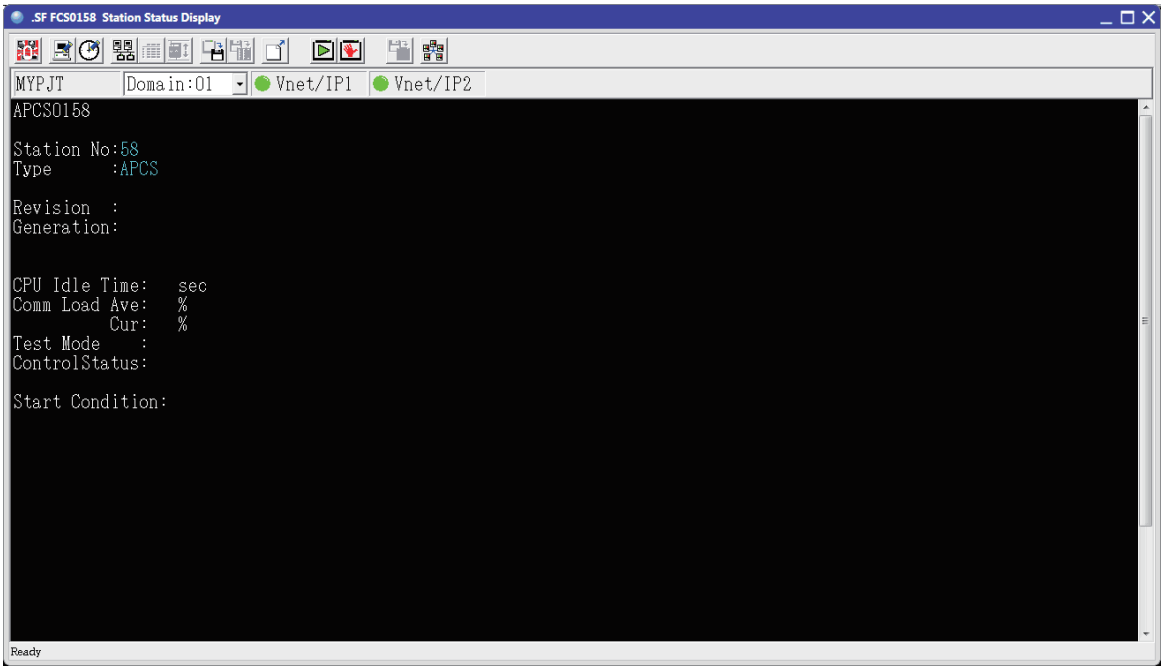

Figure 1.1.19-3 Example of APCS/GSGW Station Status Display View

5. Check that system alarms are displayed in the System Alarm View shown as the following figure.

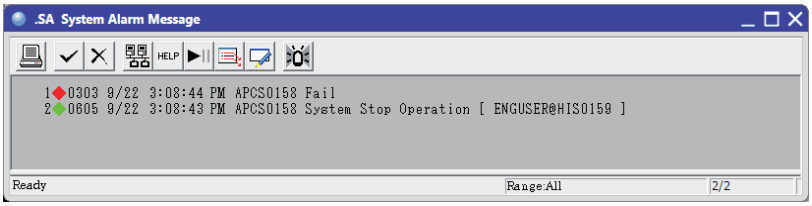

Figure 1.1.19-4 Example of System Alarm View

6. In the System Status Overview of HIS, confirm that the status of the APCS/GSGW station is displayed as the following figure.

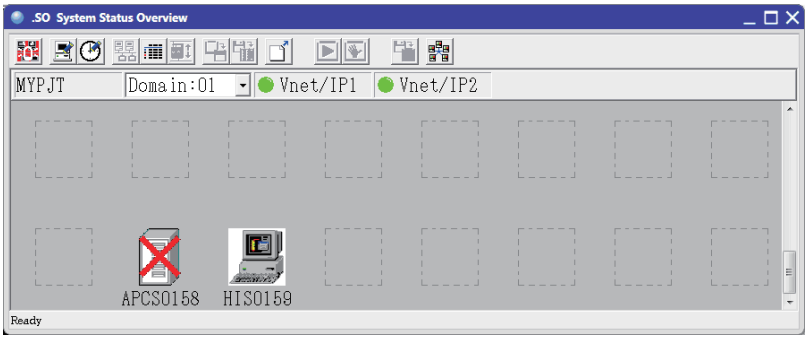

Figure 1.1.19-5 Example of System Status Overview

7. After making sure that the APCS/GSGW has stopped, shut down the APCS/GSGW computer.

Behaviors of inter-station data link

On a control station that has definition of inter-station data links with stations (FCS, APCS, GSGW, UGS, UGS2, and SCS) in other domains, the data update of inter-station data links may be suspended for 20 seconds if a data-link destination station in another domain fails.

To deal with this concern, use the SEBOL assignment statement instead of the inter-station data link block on applications that has risks resulting from the 20-second suspension of data update. To replace inter-station data links with SEBOL, you must create SFC blocks for each data-link destination station.

TIP

- In addition to the inter-station data links with the failed station, the suspension of data update may also occur for the inter-station data links with the other unfailed stations in different domains or in the local domain.
- Data update is not always suspended for all the inter-station data links on a control station that inter-station data links are defined.
- The data update is not suspended if a data-link destination station in the local domain fails.
- The suspension of data update occurs only once with each fail of a data-link destination station in other domains.
- During a 20-second suspension of data update, the alarm status does not become IOP or OOP for the function blocks that perform inter-station data link.
- After a 20-second suspension of data update, the alarm status becomes IOP or OOP for the function blocks that perform inter-station data link with the failed destination station.

1.1.20 Access Administrator Package (FDA:21 CFR Part 11 Compliant) and Access Control Package

Precautions regarding to Access Administrator Package (FDA:21 CFR Part 11 Compliant) and Access Control Package are explained in the following texts. In this document the following packages are all referred to as FDA:21 CFR Part 11 Compliant Packages.

Limitation on the Number of PCs for Storing Audit Trail Database (FDA:21 CFR Part 11 Compliant)

If the Audit Trail database is installed in a PC in which the operating system is Windows Workstation, restricted by the specification of Windows, the number of clients with FDA:21 CFR Part 11 Compliant packages can be connected to the database is limited to four. If five clients are connected to the database, the data storage in the database might be damaged.

Precaution on PCs for Storing Audit Trail Database (FDA:21 CFR Part 11 Compliant)

In general Audit Trail database and project database should not be placed in a same PC. If Audit Trail database and a project database are put in the same PC, when running the project database equalization, the number of connections to the remote PC may exceeds the limit.

Precautions on Audit Trail Database Operations (FDA:21 CFR Part 11 Compliant)

Since the number of connections to the database is limited by Windows specification, when the limit is exceeded, the data storage in the Audit Trail database might be damaged. Do the following to store the data in perfect conditions.

- Before starting Audit Trail or before changing the settings of audit trail database and the access route from Access Control Utilities, make sure that the System View and Recipe View are closed. After the changing on Audit Trail database is completed, System View and Recipe View can be started.
- If the audit trail data are not properly stored after Audit Trail starts, the Audit Trail should be closed and restarted.
- If clearing the audit trail database failed, the audit trail database should be cleared again.

SEE ALSO For more information about the restrictions in Windows specification, refer to:

1.4, “Connection of Multiple Computers in Windows Environment” on page 1-128

Precaution on Audit Trail Database Location (FDA:21 CFR Part 11 Compliant)

Do not specify that the Audit Trail database is stored under the project folder using Access Control Utilities. If specified, an error message is displayed when you try to change project properties on System View and you cannot change project properties.

Engineers' Account Files [Access Administrator Package (FDA:21 CFR Part 11 Compliant) and Access Control Package]

- The security of engineers' account files needs to be taken care properly. When operating on CENTUM Desktop, the unintended damage to the files such as move or delete the files, should be avoided.

- Do not create the engineers' account file immediately under drive C using Access Control Utilities.
  If you create the engineers' account file immediately under drive C, an error dialog box is displayed in CENTUM authentication mode when a user who does not have an administrator's right enters a password in the logon dialog box and click [OK] button.

1.1.21 Recipe Management Package

Cautions on using Recipe Management Package

Control Recipe Formula Export File (Process Management)

The control recipe formula can be exported to an external file (from either recipe builder or general-purpose export file). In order to apply this function, the master recipe need to be newly created or rebuilt using the Recipe Management Package.

Unit Recipe Status Change Command

The status change command of unit recipe such as "END" or "ABORT" is executable simultaneously in up to 8 unit recipes.

Check Duplications of Batch IDs Across Recipe Groups

When multiple recipe groups are used, the server station of each recipe group must be defined as a server station, either the first or the second server station, or a client station of all the other recipe groups. In order to avoid duplication, the batch ID should be generated with affixed recipe group number (this is the default Batch ID format).

If a recipe group's server station is not defined in other recipe groups, when generating Batch ID, a duplicated Batch ID may be generated and the existing identical Batch ID can no longer be identified and the reserved recipe formula data cannot be shown.

Duplicated Formula Definitions

If the same formula is defined with different data values in multiple steps of a single recipe, a warning message will be displayed. The formula number shown in the message is the number that is shown in the Formula tab of the Recipe Builder. Use this number to identify duplicated formula definitions and correct them by using the Recipe Procedure Builder.

1.1.22 Exaopc OPC Interface Package (for HIS)

Cautions on using Exaopc OPC Interface Package (for HIS)

A&E Filtering

Exaopc A&E server, the event categories for dialog messages are changed as follows:

- Software release R3.05 or later for CENTUM CS 3000
  The dialog messages are notified as operation guide messages.
- Before R3.05 for CENTUM CS 3000
  The dialog messages were notified as sequence messages.

The dialog messages can be notified either as operation guide messages or as sequence messages. The event category is changeable by editing the registry.

Registry key :	`HKEY_LOCAL_MACHINE\SOFTWARE\YOKOGAWA\CS3K\HIS\OPC\OPCAE\AECS1`
Value name :	`CSMDLG2COPG`
Value type :	`REG_DWORD`
Value=1 :	Categorized as operation guide messages based on HIS specification (default).
Value=0 :	Categorized as sequence messages as before.

Difference in Message Output between A&E Server and HIS Historical File

There are following differences between the messages sent from the Exaopc A&E Server to the client and the messages stored in the HIS historical file (HISHIST):

- "Process alarm normal recovery" message notifying that causes of all the function block alarms are solved. (Message No.: 0x1106)
  The message is not sent from the Exaopc A&E Server, but is stored in HISHIST.
- "Process alarm continuation" and "Annunciator generation continuation" messages: Re-alarming (Message No.: 0x1107/ 0x1207)
  The message is not sent from the Exaopc A&E Server, but is stored in HISHIST.
- Acknowledge message for Function block alarms and Annunciator messages (Message No.: 0x110F)
  The message is sent from the Exaopc A&E Server, but is not stored in HISHIST.

HDA Server

If HDA Server is used in a region where daylight saving time (DST) is observed, there are cases where Trend data or Closing data are not obtained correctly.

In this case, you can work around by following the steps below:

1. Log on to a CENTUM VP HIS as an administrative user.
2. In the following registry, set `1`.

Registry key :	`HKEY_LOCAL_MACHINE\SOFTWARE\YOKOGAWA\CS3K\HIS\OPC\OPCHDA`
Value name :	`EnableNewTimeConv`
Value type :	`REG_DWORD`
Value=1 :	Data is obtained correctly in the DST regions.

Value=0 : Default

3. Restart HIS.

In the region where DST is not observed, no problem arises.

Enhanced Batch Server

If an enhanced batch server is used in a region where daylight saving time (DST) is observed, there are cases where historical messages are not obtained correctly.

If this happens, you can work around by following the steps below.

1. Log on to a CENTUM VP HIS as an administrative user.
2. In the following registry, set "1".

   Registry key : `HKEY_LOCAL_MACHINE\SOFTWARE\YOKOGAWA\CS3K\HIS\OPC\BATCH`

   Value name : `EnableNewTimeConv`

   Value type : `REG_DWORD`

   Value=1 : Messages are obtained correctly in the DST regions.

   Value=0 : Default

3. Restart HIS.

In the region where DST is not observed, no problem arises.

HIS System Alarm Triggered by Exaquantum Server Historical Data Catch-up

If SOE Server package and Exaopc OPC Interface Package (HIS) are installed in different PC, after installing CENTUM VP and setup HIS OPC client, the following problems may occur:

- When SEM OPC Interface package is not installed in the SOE server PC, the HIS system alarms cannot be triggered.
- When SEM OPC Interface package is installed in the SOE server PC, the Exaquantum Server historical data catch-up feature does not function.
  Under theses circumstances, you need to setup the SOE server according to the procedure below:
  1. Install SQL Server
  2. Setup HISOPC client
  3. Install VP packages
  4. Configure IT Securities

Setup HIS OPC client must be performed before installing the VP packages.

If the problem is already there, you need to uninstall the VP packages and then setup the HIS OPC client. And then install the VP packages again.

Regarding Notifications on Alarm Messages of A&E Server

On [Alarm] tab of HIS Setup window, if [Referenced Message] for designating the alarm summery reference is defined, you can acquire the alarm messages occurred before the A&E server was started.

If [Referenced Message] is not defined, you can only acquire the alarm messages occurred after the A&E server was started. Nevertheless, the alarm status changes after the A&E serv-

er was started (alarm recovery or alarm acknowledgment) will not be available for the OPC client.

This behavior is similar to the Refresh method of IOPCEventSubscriptionMgt for notification on event messages.

Notice on Changing Tag Names in A&E Server

When a tag name is changed after the alarm occurred, the recovery message for the alarm event will not be informed either in new nor old tag name.

Note on the Version of Exaopc OPC Interface Package (for HIS)

If the following R5.01 or later packages or user applications are used in a system that the R4.03 or earlier HIS stations are running together, the HIS version of the station that the R4.03 Exaopc OPC Interface Package (for HIS) is used must also be R5.01 or later.

- Report Package
- Access Administrator Package (FDA:21 CFR Part 11 compliant)
- FCS Data Setting/Acquisition Package (PICOT)
- CENTUM Data Access Library
- User applications that perform OPC communication

EventRqst/ShutdownRqst Method in CENTUM Data Access Library Does Not Run Properly and Alarm Events or Shut Down Events May Not Be Notified

If an HIS that runs as a server computer restarts while an OPC client that uses CENTUM data access library is connected, and if the connected OPC client meets the conditions below, restart OPC client and reconnect as needed after the server computer is restored.

- An OPC client that executes EventRqst method and receives notification of alarm events
  Confirm whether the OPC client is notified alarm events that are generated after the recovery of server computer.

  If alarm events are not notified, restart and reconnect the OPC client.
- An OPC client that executes ShutdownRqst method and receives a shut down notification
  Restart and reconnect the OPC client after the server computer is restored.

TIP

You need to restart the OPC client for the following reasons:

Even though the OPC client executes EventRqst/ShutdownRqst method again after the server computer is restored, reconnection process in the method does not run properly in the state after the server computer aborts. As the result, alarm events or shut down events are not notified to OPC client. To recover, you must restart the OPC client and execute EventRqst/ShutdownRqst method.

1.1.23 Line Printer Output Package

Cautions on using Line Printer Output Package

Printer Page-Forward Delay Caused by Text Auto-Wrap

The Line Printer Output Package counts the number of messages sent to printer. When counting up 60 messages, it gives a page-forward command to the printer to skip the perforated line between two pages. Nevertheless, the number of printed lines changes because the automatic linefeed of the printer decides the number of string in a line. For that reason, a page-forward command for skipping the perforated line is given after 60 lines of text.

If there are only 3 or 4 long message texts auto-wrapped, it does not cause problems. If there are more messages with long text and auto-wrapped, the page-forward command may be given after the perforated line of the page, then feed an empty page until next perforated line is skipped.

The standard printer property settings limit 136 byte of text for each line including the message number, date and time stamps. Longer than this, message text will be auto-wrapped to the next line. In general, the length of one message text will not exceed 136 bytes, so that the problem will not occur. However, in the following situations, the problem may occur.

- A long text is defined for a Printout Message (%PR) on the builder.
- A long text is output by "message" SEBOL statement.
- An operation message is attached with a long description text for modification.

1.1.24 Multiple Project

Cautions on using Multiple Project

Connecting to a CS Project That Installed with Both Enet and Ethernet

When a CENTUM VP project is connected to a CS project with both Enet and Ethernet installed, the additional cautions need to be taken for the both system configuration and network configuration.

SEE ALSO For more information about more information and configuration sample, refer to:

1.3, “Connecting to a CS Project Installed with both Enet and Ethernet” on page 1-122

Connection to a CENTUM CS Project

- Problem
  If connecting a CENTUM CS project whose name contains a lowercase letter(s) to a CENTUM VP project to form multiple projects, equalization from the CENTUM CS EWS to the CENTUM VP HIS will fail.
- Salvage method
  Change the CENTUM CS project name to uppercase.

Changing a Project Name while Multiple Projects are Connected

When using the Multiple Project Connection package to change system configuration, the Project ID also needs to be changed. If a previously used project ID is to be applied, the following operations are required. If the operations in the step 2 and step 3 below are not performed, the previous lower level projects will be operated and monitored unconditionally.

1. After downloading the configuration of multiple project connection into HIS, restart the PC.
2. Download common part of the project from the lower level projects.
3. Download the tag lists from the lower level projects.

Start Number of Plant Hierarchies

When an upper level CS project is connected with lower level CENTUM VP projects, the settings for start number of plant hierarchies need to be adjusted in the CENTUM VP projects.

When start number of Plant Hierarchies is changed in a project, all the function blocks equipment IDs are changed accordingly. So that it is necessary to perform offline download to all FCSs in the project. The above operations are very important since the equipment ID is key data for security and message management. Thus, changing the start number of plant hierarchies should be performed only once after the project connection. And carelessly changing this number should be avoided.

If the circumstance does not allow offline download, stop all the unit instrument and SFC blocks in the FCS, then perform [Resolve Invalid Element] to the FCS (online download to the FCS is carried out at the same time). If the online downloading fails for a certain reason (such as a unit instrument is running or too many discrepancies or etc.), offline download becomes necessary to recover the FCS.

BCV Status Display View

When multiple projects are connected, one of the projects is a CENTUM CS system. The dual-redundant BCV downloaded from EWS for displaying on CENTUM VP HIS can only be

seen as a single bus configured BCV. This phenomenon does not occur in the CENTUM CS EWS software release R2.11 or later environment.

1.1.25 Subsystem Communication

Cautions on Subsystem communications

Cautions on Specifying [High Speed Read] with Duplicated Communication I/O Module (ACM11, ACM12)

If 200 ms or below is set to the High Speed Scan Period on FCS and duplicated ACM11 or ACM12 is used, do not check the box [High Speed Read] in [Type and Position] tab of the Create New IOM dialog box.

Settings for Running SEBOL Programs

- Gas Chromatography Communication (ACM21)
- MELSEC-A Communication (ACM71)
- FA-M3 Communication (ACM71)
- Modbus Communication (ACM71)

If executing timeshare SEBOL including the SFC blocks along with above communication functions, perform the following settings beforehand:

Change the default value of 100% for [SEBOL/User C Time Ratio] below [Detailed Setting Items] tab of the FCS Constants Builder.

If SEBOL is executed with the value of 100% set here, all communication with MELSEC is disabled. Set an appropriate value (i.e. 50%) in consideration of the percentage of the CPU usage for SEBOL.

Communication Task

When performing MELSEC-A communication (ACM71), if more than 256 words is specified as the total size of communication data in the communication I/O assignment definition, the communication task aborts. Using this communication function, the [Size] for word devices should be set within 256 words and the [Size] for bit devices should be set within 128 words (2048 bits). To prevent the occurrence of communication abnormality, make sure the total communication data are less than 256 words.

Recovery :

If the communication task is stopped by oversize, do the following operations after reducing the communication data to a size smaller than 256 words to restart the MELSEC-A communication task.

1. Go to the following directory

   ```
   >cd <CENTUM VP Installed folder>\FCS\tool
   ```

2. Start the task

   ```
   >yoktld -g -r<FCS V net IP Address> -t MELSEC_E<Task Name>
   ```

   - On FCS property sheet, the FCS V net IP address can be found on [Network] tab.
   - Task Name

     ```
     <CENTUM VP Installed folder>\eng\BKProject\<Project name>\<Station name>\C
     ustom\Melsec\fcs\MELSEC_E.xtsk
     ```

1.1.26 Foundation Fieldbus Communication

Cautions on Foundation Fieldbus communication

Cautions on Dual-Redundant Configuration of ALF111

To disconnect ALF111 cards or their front connectors and connect them again for the two cards in a dual-redundant configuration, this should be done one card by one card. When the ALF111 status on HIS shows the communication has recovered for the first card, or wait for more than one minutes, the disconnection and connection can be done for the second card.

If the second card is disconnected while the communication is not recovered for the first card, the ALF111 may have communication problem with the fieldbus devices. When ALF111 encounters communication error, a [C] mark is indicated on its icon in the Node Status Display dialog box.

To recover from the communication error, it is necessary to identify the physical fieldbus device by checking the CNF alarm status of FF faceplate block. And then check the address assignment of the physical device and perform [Offline Load] - [Master Load]. If the communication still not recovered, switch off and on the power supply of the physical fieldbus device.

Cautions on Barrier Implementation

If the barrier connected to the ALF111 is the type that does not supply the power to the ALF111 (host side), the ALF111 cannot monitor the power supply status thus cannot check the connection status of the connector.

In case this type of barrier is used, it is necessary to open the properties sheet of the ALF111 on System View, and enter the following script to the Command line on the [Set Detail] tab.

```
CNCTCHK=No
```

ALF111 Affected by Control Right Switching of EB401/EB501

If ALF111 cards are dual-redundantly configured, when switching control right of EB401/EB501, the standby ALF111 may fail and recovers right after. The controlling ALF111 is not affected, so that it does no harm to normal process control.

PRM Communication Conflict

While PRM (Plant Resource Manager) is accessing field devices, if IOM downloading to ALF111 or a builder operation to access the field devices (Download / Upload / Tag Assignment / Address Assignment / Device ID Acquisition/ Device Information Display) is performed, a communication error occurs and the operation fails. When this happens, stop the accesses from PRM, then perform the failed operation again.

Nevertheless, if the error of communication conflict occurred during online downloading, the online downloading can be performed only after the discrepancies are abstracted. Offline downloading can be performed to the field devices after the online downloading fails.

Software Downloading Notice (1)

When downloading the software, the downloading result (software upgrading) will be informed to the HIS as an operation message. Thus the HIS environment should satisfy the following requirements:

- Exaopc OPC Interface Package (for HIS) needs to be installed at least in one HIS in the project, and the HIS should have Ethernet connection with the PC where the software downloading is performed.

- The HIS installed with Exaopc OPC Interface Package (for HIS) and the HIS to be informed about the software downloading result should be in the same project.

Software Downloading Notice (2)

If downloading is performed from system builders to the devices where the software downloading is performed, the software downloading will be ended with error.

The software downloading to the device needs to be performed again after the downloading from the system builder is completed.

Notes on Contents Shown in Manual Registration Dialog Box

In the Manual Registration dialog box, vender names are not shown for AUMA (ManufacID: 0x0A01FF) and Draeger (ManufacID: 0x520000) and displayed as follows:

```
0A01FF

520000
```

Also note that these items are displayed as follows in the template selection dialog box.

```
0x0A01FF()

0x520000()
```

1.1.27 Device Panel

Cautions on using Device Panel

FDA:21 CFR Part 11 Compliance

Device Panel does not supports following functions.

- Access control
- Audit Trails

For the projects of foods and drugs, the Device Panel can be used under the management procedures that complaint the FDA:21 CFR Part 11 procedures.

Number of Segments that Can Be Simultaneously Displayed

On Device Panel, up to four segments (windows) can be displayed simultaneously.

However, if Device Panel is used on multiple PCs installed with system builders, the same segment cannot be displayed on different PCs simultaneously.

Device Panel with Remote Operation and Monitoring Function

The maximum number of segments (windows) of Device Panel can be simultaneously displayed is four. When displaying a new window while all sessions are occupied, the new window can only be displayed after closing an opened window.

If four windows cannot be displayed, it is necessary to run the command included in the CENTUM VP Media to setup the registry regarding the HIS-TSE graphic area expansion. And then, up to four windows may be displayed.

```
<CENTUM VP installed folder>\CENTUM\COMMON_MS\NOLANG\DevicePanel.reg
```

When the registry is setup, the PC needs to be restarted.

Environment Settings

If multiple PCs or multiple HIS-TSE clients are accessing the Device Panel, the same path for the library database should set to the environment settings of Device Panel for all the PCs.

1.1.28 System Integration OPC Client Package

Cautions on using System Integration OPC Client Package

Behavior when Item Data for SIOS Tag and SIOS Instrument Tag is Written

If values of the data items for SIOS tag and SIOS instrument tag are overwritten from HIS, there are cases where the values before the change is reappear in their field before the overwriting values appear.

This phenomenon occurs if SIOS has not completed sending its readout data back to HIS. When SIOS writes data in the OPC server, the OPC server immediately writes the data in the connected system. But the data in the connected system is sent back to the OPC server at the data update period of the OPC group. This causes some time lag in updating data from HIS. This phenomenon is remarkable if the data update period of the OPC group is long.

Editing Files Created from SIOS Engineering Window

The file extension of the OPC Browse files and OPC Server Definition files created from the SIOS Engineering window is ".csv". If the Microsoft Excel is installed to the SIOS PC and if you select one of the Excel files from the SIOS Engineering window and click [Open], floating-point number data whose fraction part are all "0" is displayed as an integer with the fraction part removed.

Regarding scale data such as SH/SL, if the fraction part of the values is filled with "0" for the purpose of specifying the decimal place, and if the file for such data is overwritten and saved using Microsoft Excel, fraction part is removed.

In the application program for editing CSV files, register a text editor such as memo pad or one of other CSV file editors in relation with the Windows file extensions.

SIOS Communication Error Response Disabled

If the notification for the communication response error of SIOS is disabled, the data cannot be updated in between SIOS and the connected devices, therefore, the data status may become BAD status and this BAD status will be passed to the HMI that referencing the erroneous data, if the SIOS is R3.07 or a prior version for CENTUM CS 3000. However, for SIOS instrument tags, the data status will be used for indicating the connected device data status, the BAD status caused by the above described communication error will not be notified. Nevertheless, this problem does not affect the SIOS tags.

From R3.08 for CENTUM CS 3000, the communication response becomes available for indicating the abnormalities on data updating caused by unknown error. When the error codes for SIOS instrument tags and SIOS tags are enabled respectively, the HMI will be notified and the data will be displayed as [****].

1.1.29 Vnet/IP

Cautions on using Vnet/IP

View tab of Browser Bar

Under [SYSTEM] > [.SO System Status Overview], the stations (FCS and BCV) of the project can be displayed. With Vnet/IP environment, the BCV cannot be displayed due to the generic routers are used among the domains.

Thus, only the BCV of the same domain (the same domain with the HIS for displaying) can be displayed under [SYSTEM] - [.SO System Status Overview].

To display the stations of different domains, you can choose a domain number from the domain list on the System Status Overview window.

1.1.30 PROFIBUS Communication Module(ALP111)

Cautions on PROFIBUS Communication Module

Slave Device Alarm

The specification of PROFIBUS-DPV1 in the software release R3.04 does not handle the slave device alarm messages. Thus, the system alarms message numbered 4051 and the fieldbus messages numbered from 3305 to 3321 cannot be generated. On the properties sheet of PROFIBUS-DPV1 on System View, the option [DPV1 Process Alarm from Slave Device is notified as System Alarm] will not function even it is checked.

About Diagnostic Communication Error Message of ALP111 Dual-Redundant System

After upgrading CS 3000 system to R3.07 or a later version, if a pair of ALP111 modules loaded with a PROFIBUS-DP communication driver of R3.06 or a prior version are used, the standby ALP111 module may mistakenly initiate the system alarm messages of diagnostic communication error or diagnostic communication recovery (SS-COM Error Messages, message number of 0089 and 0090).

To avoid the erroneous occurrence of the diagnostic communication error or diagnostic communication recovery messages, it is necessary to download the ALP111 communication driver to the ALP111 communication module after upgrading to R3.07. (However, for the new system of R3.07, this phenomenon is irrelevant to the newly installed ALP111 as well as the configuration and installation of the related node). Regarding downloading the communication driver, it can be performed on the IOM properties sheet of ALP111 on System View. Downloading needs to be performed after modifying the properties.

1.1.31 PROFIBUS Communication Module (ALP121)

Cautions on PROFIBUS Communication Module

Note on PROFIBUS-DP Configurator

In the PROFIBUS-DP configurator window, red [x] may be displayed as icons of registered PROFIBUS slave devices and you may not be able to operate the slave devices or edit their configuration data.

This problem occurs when the structure of the project database folder is changed due to system recovery from a backup of CENTUM VP project database or system upgrading or when the Windows OS is re-installed.

This is caused because data in the internal format the PROFIBUS-DP configurator uses are not included in the scope of CENTUM VP project data backup.

If this problem has occurred, follow these steps with the PROFIBUS-DP configurator to re-create the internal data for recovery:

1. In the main window of the PROFIBUS-DP configurator, select an icon for ALP121.
2. From the menu, select [Network] > [Import Device Descriptions].
   netDevice - Import Device Description dialog box appears.
3. Select the GSD files of the corresponding slave devices and click [Open].

1.1.32 PROFINET Communication Module (A2LP131)

This section describes about limitations on the PROFINET Communication Module.

Limitation on Starting PROFINET IO-Devices

If the communication paths are established at one time between A2LP131 and nine or more PROFINET IO-Devices, the PROFINET IO-Devices that have already been connected with A2LP131 may be disconnected, and the system alarms and the process alarms related to PROFINET IO-Device may be generated.

A communication path is established in the following cases:

- When A2LP131 starts.
- When a PROFINET IO-Device starts.
- When the communication path between A2LP131 and a PROFINET IO-Device recovers after it was disconnected.

The disconnection between A2LP131 and the PROFINET IO-Device recovers automatically.

Avoidance:

- Reduce the number of PROFINET IO-Devices to eight or less as the target of establishing a communication path with A2LP131 at one time.
- If the communication paths are established at one time between A2LP131 and nine or more PROFINET IO-Devices, a temporary communication error is expected, and thus you must ensure that the communication has been established with all the PROFINET IO-Devices before you start operating the plant.
  You can tell that communication paths have been established if the status of alarms related to the connection of PROFINET IO-Device is not IOP or OOP.

Limitation on Device Tag of a PROFINET IO-Device

When you set Device Tag for a PROFINET IO-Device by using PROFINET Configurator, it must be no more than 128 characters.

If you set Device Tag with 129 or more characters, the following phenomena occur.

- If you perform the module-based engineering, an error occurs in a check-in process of AD Organizer.
- If you do not perform the module-based engineering, restart of A2LP131 may fail when it is restarted immediately after the settings are downloaded to it.
  The error code of alarms do not tell you that the number of characters for Device Tag is the cause of the failed start of A2LP131.

Recovery:

In PROFINET Configurator, set Device Tag of the PROFINET IO-Device with 128 or less characters and download to A2LP131.

Precautions when connecting A2LP131 and PROFINET IO-Device with an Ethernet cable

The PROFINET IO-Device described here also includes the Managed switch.

On rare occasions, the A2LP131 module may fail due to the following reasons.

- The Ethernet cable that connects a running A2LP131 and the PROFINET IO-Device was removed and inserted.
- The PROFINET IO-Device that is connected to a running A2LP131 with an Ethernet cable is stopped and started.

- A not yet running A2LP131 is connected to an already started PROFINET IO-Device with an Ethernet cable, followed by a start of the A2LP131.

If A2LP131 module failed, firstly, check that the Ethernet cable is inserted to A2LP131 and the PROFINET IO-Device, and that the PROFINET IO-Device is running. Secondly, eject A2LP131 from the slot, wait for two seconds or more, and then insert it back to the slot.

If A2LP131 module failed due to the reasons mentioned above, it recovers, whereas A2LP131 module remains failed if it has been broken down.

1.1.33 Security

Notes on securities will be explained below.

Notes on Installing ProSafe-RS Safety System Engineering and Maintenance Function

If you have installed ProSafe-RS safety system engineering and maintenance function for ProSafe-RS R4.01.00 or ProSafe-RS R4.02.00 after installing CENTUM VP R6.04.00 or later, start the IT Security Tool according to the following steps.

1. Log on as an administrative user.
2. Insert CENTUM VP software medium into the drive.
3. Copy the following file in the software medium to the copy destination folder.
   File to copy:

   `<DVD drive>:\CENTUM\SECURITY\Yokogawa.IA.iPCS.Platform.Security.ITSecurityTool.exe.config`

   Destination folder:

   `C:\Program Files (x86)\YOKOGAWA\IA\iPCS\Platform\SECURITY\PROGRAM\`
4. Start the IT Security Tool.

Notes on Installing Exasmoc R4.03.00/Exarqe R4.03.00

If you have installed Exasmoc R4.03.00/Exarqe R4.03.00 after installing CENTUM VP R6.04.00 or later, follow these steps to start the IT Security Tool:

1. Log on as an administrative user.
2. Insert CENTUM VP software medium into the drive.
3. Copy the following files in the software medium to the copy destination folder.
   Files to copy:
   `<DVD drive>:\CENTUM\SECURITY\Yokogawa.IA.iPCS.Platform.Security.ITSecurityTool.exe.config`

   `<DVD drive>:\CENTUM\SECURITY\AccessRights.config`

   `<DVD drive>:\CENTUM\SECURITY\Interop.NetFwTypeLib.dll`

   Destination folder:
   `C:\Program Files (x86)\YOKOGAWA\IA\iPCS\Platform\SECURITY\PROGRAM`
4. Then, copy the following files in the software medium to the copy destination folder.
   Files to copy:
   `<DVD drive>:\CENTUM\SECURITY\SettingFiles\1.0\_hardeningReserve_jp.csf`

   `<DVD drive>:\CENTUM\SECURITY\SettingFiles\1.0\_hardeningReserve_en.csf`

   `<DVD drive>:\CENTUM\SECURITY\SettingFiles\1.0\_unhardening.csf`

   `<DVD drive>:\CENTUM\SECURITY\SettingFiles\1.0\_hardening.csf`

   Destination folder:
   `C:\ProgramData\Yokogawa\IA\iPCS\Platform\Security\System\Default\1.0`
5. Start the IT Security Tool.

Notes on Changing Security Model in the File Server

If both CTM_MAINTENANCE group and CTM_MAINTENANCE_LCL group exist or other similar cases occur after you change the user management method in the file server, delete invalid groups and unnecessary users according to the following steps.

1. Start command prompt as a user with administrative rights.
2. Insert CENTUM VP software medium into the drive.
3. Execute the batch file that is stored in the installation medium according to the applied user management method.
   - For standalone management:
     `<DVD drive>:\CENTUM\TOOLS\SECURITY-SEC-0059_STA.bat`
   - For domain or combination management:
     `<DVD drive>:\CENTUM\TOOLS\SECURITY-SEC-0059_DOM_CMB.bat`

   Move users who are the member of an invalid group to a valid group and delete the invalid group.
4. If a valid group contains users who do not require the rights that are granted to this group, delete those users.

TIP

Apart from the combination of CTM_MAINTENANCE group and CTM_MAINTENANCE_LCL group, this is applicable to the following combinations of groups.

- CTM_OPERATOR and CTM_OPERATOR_LCL
- CTM_ENGINEER and CTM_ENGINEER_LCL
- CTM_ENGINEER_ADM and CTM_ENGINEER_ADM_LCL
- CTM_OPC and CTM_OPC_LCL

Notes on Users Who Configure IT Security Settings in the File Server and the Domain Controller

Following errors may occur if the IT security settings are changed and configured after the IT security settings file is restored in the file server of Windows Server 2008 R2 or the domain controller.

- Access to `(C:\Windows\Sysnative\arp.exe)` has been denied.
- Access to `(C:\Windows\Sysnative\finger.exe)` has been denied.

If those errors occur, configure IT security settings according to the following steps. Steps are different between a case that the user who restores exists and a case that the user who restores is deleted.

How to check the user who restores is explained first.

1. Open Explorer, select a program that is described in the message for the occurred error, and right-click to select the property menu.
   Properties of the selected program appear.
2. On the security tab, check the owner.
   This owner is the user who performed the restoration.
   - If you find that the user who performed restoration exists, log on as the user who performed the restoration and configure the IT security settings.
   - If you find that the user who performed restoration does not exists, go to step 3.
3. Log on as an administrative user.

4. Start `C:\Windows\SysWow64\cmd.exe`.
5. In the cmd.exe window, execute the following command.
   `<CENTUM VP installation medium>:\CENTUM\TOOLS\SECURITY-SEC-0060_Repair.cmd`
6. Configure the IT security setting as the user who executes the above command.

Notes on Installing Device Viewer to PRM Client PC

When installing Device Viewer to PRM client PC, the files will be installed to the folders that beyond the management of CENTUM VP. Therefore, the CENTUM VP users (users of CTM_OPERATOR, CTM_ENGINEER, CTM_ENGINEER_ADM and CTM_MAINTENANCE groups and OFFUSER) do not have access permissions to Device Viewer.

In order to solve this problem, add the following users as members of the PRM_USER group.

- When PRM is earlier than R3.01
  OFFUSER and users who belong to the CTM_OPERATOR, CTM_ENGINEER, CTM_ENGINEER_ADM, or CTM_MAINTENANCE group
- When PRM is R3.01 or later
  Users who belong to the CTM_OPERATOR, CTM_ENGINEER, CTM_ENGINEER_ADM, or CTM_MAINTENANCE group

Notes on Installing CENTUM VP and prior R3.90 version Exapilot in the Same PC

- When installing Exapilot in a PC where CENTUM VP is already installed, the user who performs the installation should be assigned as a member of both the EXA_MAINTENANCE and CTM_MAINTENANCE groups after the EXA_MAINTENANCE group is created.
- When installing CENTUM VP in a PC where Exapilot is already installed, the user who performs the installation should be assigned as a member of the EXA_ MAINTENANCE group.

Notes on Using Exapilot ActiveX Components in Graphics

When the Standard model or Strengthened model is selected as the security model, to use user programs (ActiveX/.net controls) embedded in graphics in the environment of HIS type single sign on, you need to perform the following procedure.

Use Exapilot R3.80.01 (R3.80 + patch pack R3.80.01) or R3.90.

- When CENTUM VP R5.01 or later and Exapilot Server are installed in the same PC
  Exapilot R3.80.01 should be installed by a user who belongs to the CTM_MAINTENANCE group.

  After installation, assign OFFUSER to the PLT_OPERATOR group when the user management is standalone management; or assign OFFUSER to the PLT_OPERATOR_LCL group when the user management is domain management or combination management.

  For Exapilot R3.90, special procedure is not required.
- When CENTUM VP R5.01 or later and Exapilot Server are installed in Separate PCs
  Perform the following procedure. The procedure is the same for Exapilot R3.80.01 and R3.90.

  On the Exapilot Server PC, use CENTUM\SECURITY\Yokogawa.IA.iPCS.Platform.Security.CreateOffuser.exe in the CENTUM VP software medium to create OFFUSER. Assign the created OFFUSER to the Windows group as shown in the following table.

Table 1.1.33-1 User Management Type and Corresponding Windows Groups

User management type	Group
Standalone management	PLT_OPERATOR
Domain management/combination management	PLT_OPERATOR_LCL

Notes on Using ActiveX Components and .NET Components in Graphics

When the Standard model or Strengthened model is selected as the security model, to use a user-created program that performs OPC communication in the environment of HIS type single sign on, you need to assign OFFUSER to the Windows group as shown in the following table.

Table 1.1.33-2 User Management Type and Corresponding Windows Groups

User management type	Group
Standalone management	CTM_OPC
Domain management/combination management	CTM_OPC_LCL

For the user programs (ActiveX or .NET controls) that are to be embedded in graphics on HIS, you need to set permissions appropriately so that they can run on the graphics (for example, file execution permission and permission to access the network).

In the environment of HIS type single sign on, if you use user programs (ActiveX or .Net controls) not located in the default folder, you need to set permissions (for example, file execution permission) for the controls so that they can be accessed by OFFUSER.

Notes on using the Run tool button on CAMS for HIS Message Monitor

When HIS type single sign on is used, if you click the [Run] button on the tool bar of CAMS for HIS Message Monitor, the application runs with the OFFUSER's permissions.

So, you need to set the application so that it runs with the OFFUSER's permissions in advance.

When you set up the Start Application command to start an application that performs OPC communications, the OFFUSER should be assigned to the CTM_OPC user group when the security model is stand-alone management type, or the CTM_OPC_LCL user group when the security model is domain management or combination management type.

Precaution when using Exaopc in the Windows authentication mode

If Exaopc is used in the Windows authentication mode, a password cannot be set for the Exaopc user. Use Exaopc in R3.60.06 or later.

Notes on Managing Project Files and Connecting Multiple Projects on a File Server

When the Standard model or Strengthened model of security settings are applied and a file server is used to manage project files, you need to set user access permissions appropriately for the project files.

Note that, when connecting with a project earlier than R5.01, you also need to set appropriate user access permissions for the old project that is to be accessed.

For example, you need to set permissions for the access users in standalone management and for users that is used in emergency situations (user name starting with an under score _) in domain management or combination management.

The users who need access permission setting are as follows:

- Users in standalone management
- Local users in combination management
- Users for emergency situations in domain management or combination management
- OFFUSER
- CTM_PROCESS
- Application program users who access CENTUM VP project files

Display of Task Bar Buttons for Tools Started from Browser Bar in Windows Authentication Mode

In Windows authentication mode, when you start System View, the report package program, or a recipe view from Browser Bar, their icons on the task bar buttons may not be displayed properly. This problem does not affect operation of the tools.

This problem occurs in one of the following conditions.

- In Windows authentication mode, log on as a user who belongs to the CTM_OPERATOR group and HIS is automatically started, or HIS is automatically started by HIS type single sign on.
- User-in to HIS as a user who belongs to the CTM_ENGINEER group.
- Start System View from Browser Bar.
  (In this case, the icon on the System Views title bar is displayed normally.)

Domain User Name and Password Entry when Restoring Security Settings by IT Security Tool

If you log on to a PC connected in a domain as a local user and try to run the IT Security Tool to restore the settings of standalone environment, the tool requires to enter a domain user name and password despite that user management is standalone type. If required, enter the domain user name and password.

Cautions when Restoring IT Security Settings

When you use IT Security Tool to restore the IT security settings in a file that was saved on a domain controller, the security settings cannot be restored as you expect if the user/group information at the time of restoration differs from that when the security settings were saved.

This applies to the cases, for example, where any of the following changes have been made after the saving of IT security settings:

- Delete a user or group.
- Delete a user or group and create it again.
- Change the group to which a user belongs.

If you run the restoration in a situation different from that when the security settings were saved, the security settings will be as shown below. Modify the IT security settings as necessary.

- When groups existed at the time of saving exist on the current domain controller
  The information on user assignments to the groups at the time of saving is added to the user assignment information existing in the domain controller.

  You need to modify the IT security settings so that the assignments of users to groups are consistent with the current situation.

- When groups existed at the time of saving do not exist on the current domain controller
  The groups existed at the time of saving is restored as local groups of the domain. The local groups have no effect on system operations, but delete them if necessary.
- When users existed at the time of saving exist on the current domain controller
  The information on user assignments to groups at the time of saving is added to the user assignment information existing in the domain controller.

  You need to modify the IT security settings so that the assignments of users to groups are consistent with the current situation.
- When users existed at the time of saving do not exist on the current domain controller
  An error occurs. Even if the error has occurred, the IT security setting items other than those related to users and groups are restored correctly.

1.1.34 License Management

Tasks Required After the Station Configuration of a License Project is Changed

Changing of station configuration refers to addition and deletion of stations and renaming of computers.

If you have changed the station configuration of a license project, excluding the changes related to FCS and SCS, perform the tasks shown in the following table.

Table 1.1.34-1 Tasks Required After the Station Configuration of a License Project is Changed

Change	Task
Add a station	Distribute and accept licenses on the added station. Then, distribute master licenses to the other stations. (*1)
Delete a station	After deleting a station, distribute master licenses to all stations.(*1)
Rename a computer	Distribute and accept the licenses on the station you have changed the computer name. Then, distribute master licenses to the other stations.(*1)

*1: Destinations of license distribution are PC-based stations such as HIS, PCs installed with system builders, APCS, GSGW, SIOS, and UGS; FCS and SCS are not included.

Distributing a master license does not require license acceptance on the destination station or restarting of the destination station. Master license distribution is basically used to redistribute the license information that is already distributed to specified stations; however, only the station configuration is updated here.

1.1.35 ProSafe-RS Connection

Cautions on connecting ProSafe-RS with CENTUM VP will be explained below.

Referencing SCS Link Transmission Data

The caution is regarding the referencing the %GS(an element) from HIS and SCS Link Transmission.

HIS cannot reference the SCS link transmission data through %GS of FCS (*1). To reference the SCS link transmission data on HIS, it is necessary to define the SCS link transmission data into BOOL type variable and assign them with tag names on ProSafe-RS.

*1: HIS cannot reference the SCS link transmission data through %GS of SCS either. This is the originally specified feature.

When HIS is referencing the link transmission data received by FCS, the related %GS elements in the FCS should be converted into %SW elements using the FCS applications, or to connect the %GS elements with switch instrument blocks for referencing.

Moreover, %GS elements can be directly referenced by FCS applications.

When SCS link transmission data passed to %GS element of FCS, the actions are:

- Entering the %GS element number to the Name Entry dialog box for calling the faceplate of the %GS will result to an illegal operation error. The %GS faceplate cannot be displayed.
- Cannot reference the process data of through %GS.
- Cannot reference the process of through %GS via OPC server.
- If %GS element is used in a sequence table, when double clicking on the sequence table for a tag, an illegal operation error message will not be displayed. The %GS faceplate cannot be displayed.

1.1.36 Regarding to Adobe Acrobat

Cautions on using Adobe Acrobat.

Version of Adobe Acrobat and Adobe Reader

The version of Adobe Reader should be the same version of Adobe Acrobat for the Report package, FDA audit trails and self-documentation exports.

Conflicts between Adobe Reader and Other Programs

Adobe Readers error message box may display in the Adobe Reader. The following listed affected programs may freeze for a dozen of seconds or even abort the process with errors. To deal with these phenomena, it is necessary to end or the Adobe Reader to end all the processes, and restart the program again. These phenomena are generated because Adobe Acrobat and Adobe Reader are installed in the same PC and encounter the conflicts.

The text in the error message box is: There was an error opening this document. The path does not exist.

Affected Programs:

- When Report Package and FDA:21 CFR Part 11 Compliant Package are used.
- When the unified package for historical messages are exporting PDF file with Adobe Acrobat.
- When exporting self-documents to PDF files.
- When FDA:21 CFR Part 11 Compliant Package exports reports.
- When FDA:21 CFR Part 11 Compliant Package converts database into PDF files.

Conflicts when Exporting to PDF Files

When multiple engineering builders are exporting documents to PDF files at the same time, error occurs and the PDF cannot be properly created. It is necessary to schedule the tasks into phases. If error occurs, the builders need to be closed, and then restart.

The conflicts occur among the following tasks:

- Exporting self-documents to PDF files.
- FDA:21 CFR Part 11 Compliant Package exports reports.
- FDA:21 CFR Part 11 Compliant Package converts database into PDF files.

1.1.37 Cautions for using Windows

This section describes cautions for using operating systems Windows that run CENTUM VP.

Windows functions that are disabled when installing CENTUM VP

When you install CENTUM VP, the following Windows functions are automatically disabled.

- Displaying Account icon on the Welcome screen
- Fast User Switching
- Windows Automatic Updates

Do not enable them.

If you enable them, CENTUM VP may not function normally.

If you mistakenly enable them, disable them again and log off or restart your computer.

Power Management

Considering the situations where operation and monitoring windows are displayed, set the sleep mode setting of the Windows OS for disabling.

SEE ALSO For more information about the sleep mode setting of Windows, refer to:

- "■ Power Options" in B4.2.1, "Configuring on Windows 10" in CENTUM VP Installation (IM 33J01C10-01EN)
- "■ Power Options" in B4.2.2, "Configuring on Windows 7" in CENTUM VP Installation (IM 33J01C10-01EN)
- "■ Power Options" in B4.2.4, "Configuring on Windows Server 2012 R2" in CENTUM VP Installation (IM 33J01C10-01EN)
- "■ Power Options" in B4.2.5, "Configuring on Windows Server 2008 R2" in CENTUM VP Installation (IM 33J01C10-01EN)

Simple File Sharing

Use simple file sharing is an option disabled when installing CENTUM VP from installer.

This option can be enable to change settings on the Explorer. Choose [Tools] -[Folder options] to open [Folder Options] dialog box, on the [View] tab, the option [Use simple file sharing (recommended)] can be checked. However, to change the default setting may cause a problem. Conseguentially, this setting should not be changed.

Limit Number of Connection

The problem of Limit Number of Connection restricted by the specification of Microsoft, the number of connections can be configured to CENTUM VP system is limited. Moreover, when applying remote desktop connections, adding the connection to the remote server also affects the total connection thus the limit number must be always under consideration.

Notice When Engineering in Security Enhanced Environment

When CENTUM engineering is performed in Windows XP environment, the following folders must be set with the security of [Everyone full control].

- The folder that created for the project
- The folder of external files for engineering

How to set the [Everyone full control] security can be found in the later part of this section. In the project, there is not problem to create new files. However, for the project data and the files arbitrarily placed by user need to be noticed. The folder of external files for engineering have the following files.

Table 1.1.37-1 Folder of External Files for Engineering

Folder	Security Notice
Folder for project backup files	Access right need to be set by user's responsibility.
Folder for files saved with new names	
Folder for exported files	
Folder for self-document PDF files	
Folder for host file set from Fieldbus builder	No problem since the default folder is within the project.
Folder for holding new linked parts files	

How to set the [Everyone full control] security is shown as follows. This setting needs to be done before putting the engineering files into the folder.

1. Logon the PC with the administrator privilege.
2. Open the properties sheet of the folder.
3. Open Security tab.
4. If Standard model security is applied, add groups "CTM_ENGINEER" and "CTM_MAINTENANCE". And if you are a member of a Windows domain, add the group "CTM_MAINTENANCE_LCL". If Basic model security is applied, add "Everyone".
5. If Standard model security is applied, select the "Full Control" check box for the groups added in step 4, and select the checkbox "Read" for "Everyone". If Basic model security is applied, select the checkbox "Full control" for "Everyone".

Remote Desktop Engineering

When a builder is used for downloading and saving files, if the desktop is remotely logon with remote desktop functionality, the user in the server is logged off severed and the remote user logged on with a different account. If this happens the saving or downloading processes are interrupted and end up with inconsistent project data files. This may consequently leave many problems for the future engineering works. If remote desktop connection is used, the server and client must use the same account. The same account should be used for all the PC that may involve in the remote connections.

IMPORTANT

When try to establish remote connection with a different account from the server, a message of "The user Txxx\Axxx is currently logged on to this computer, if you continue, this user's Windows Session will end and any un-saved data will be lost. Do you want to continue?" displays. If this happens, the connection must be canceled.

PC Shutdown

When shutdown the PC used as the operation and monitoring console, do not choose Sleep.

If standby is activated, the HIS may not be running properly and the HIS needs to be restarted.

Remote Desktop Connection and Control Bus

The remote desktop cannot be established through the control bus. A CS1000 project may be configured with control bus only without using Ethernet. However, to apply remote desktop connection to this kind of system, an Ethernet network must be configured.

Automatically Synchronization with Internet Time Server

With CENTUM VP installer, the time synchronization with Internet server options is disabled. You can enable this capability if you choose [Control Panel] > [Date and Time], open Internet Time tab, and check [Automatically synchronize with an Internet time server] option. However, do not change this setting. This change causes a conflict against the time synchronization of control bus. Moreover, on HIS event viewer, W32Time error may be recorded.

1.1.38 Unified Gateway Station (UGS)

Notes on using UGS are explained here.

UGS Configuration File

The network interface IP address setting in the UGS configuration file (SystemConfiguration.xml) does not take effect. Because of this, downloading of engineering data is accepted by all the network interfaces of the UGS even if you set an IP address in the configuration file.

Also, the ConfigPort setting in this file does not take effect. If you wish to change the ConfigPort setting from its default value, follow these steps.

1. Open the following file.
   `C:\Program Files (x86)\Yokogawa\IA\iPCS\Products\CENTUMVP\Program\Yokogawa.IA.iPCS.CENTUMVP.UGS.ENG.FileTransferServiceDispatcher.exe.config`
2. Change the value of the "Value" in the following line.
   <ISBConfigItem Name="ConfigPort" Value="38010"/>

Connection with a Modbus Controller

If a Modbus controller is accessed from UGS under either of the conditions shown below, data reading is performed normally but data writing results in a communication error and communication between the UGS and Modbus controller is interrupted for several seconds.

- A register having a Daniel expanded area (four-byte register) of the Modbus controller is accessed as two-byte data from UGS.
- A two-byte register of the Modbus controller is accessed as four-byte data from UGS.

When you perform engineering, pay extra attention to ensure that four-byte registers are accessed as four-byte data and two-byte registers are accessed as two-byte data.

Connection with FCN/FCJ in Duplicated Network

When UGS and FCN/FCJ are connected in a duplicated network, if a breakage occurs in the backup network, the data updating with the connected FCN/FCJ may be delayed for a few seconds. However, UGS holds the previous data values while data updating is being delayed.

Therefore, the previous data values are displayed on HIS during the delay, and thus no error is generated.

Connection with an OPC DA Server

You cannot connect VT_BOOL type data in the OPC DA server to data faceplate block USD-I32 or USD-U32.

VT_BOOL type data in the OPC DA server should be connected to data faceplate block USD-I16.

Changing Serial Ports by Online Maintenance

You can change the serial port for connection with a Modbus controller by online maintenance.

However, if you change to already used serial ports as shown in the following example, the online maintenance succeeds but the communication will not start normally.

Example:

- Controller A: COM1 -> COM2
- Controller B: COM2 -> COM1

In this case, change to non-used serial ports once, and then change to the desired serial ports as shown in the following example.

Example:

- Controller A: COM1 -> COM3 -> COM2
- Controller B: COM2 -> COM4 -> COM1

Prog ID Setting in the OPC DA Server

You cannot change Prog ID, which is the controller attribute of the OPC DA server, if the engineering data is once downloaded or saved after Prog ID is initially set.

Follow these steps to change Prog ID.

1. Create a new OPC DA server and set the Prog ID.
2. Export the original OPC DA server to create a definition files.
3. Import the definition files to the OPC DA server you have created.
4. Delete the original OPC DA server.
5. Download or save the engineering data.

Settings for Multi-Drop Connection of Modbus Controllers

You cannot change "Sub Controller ID" and "Route," attributes that are set when a Modbus controller is connected in multi-drop connection if the engineering data is once downloaded or saved after these attributes are initially set.

To change these attributes, you need to follow these steps.

1. Create a new Modbus controller and set "Sub Controller ID" and "Route."
2. Export the original Modbus controller to create a definition files.
3. Import the definition files to the Modbus controller you have created.
4. Delete the original Modbus controller.
5. Download or save the engineering data.

Exporting a Modbus Controller in Multi-Drop Connection

If you export a Modbus controller in multi-drop connection, the set "Sub Controller ID" and "Route" attributes are lost.

When you import an exported definition files, you need to set "Sub Controller ID" and "Route" again.

Ack operation when redundant UGS is undergoing switchover or failover

When a redundant UGS is undergoing switchover or failover, a system alarm message will be displayed on CAMS for HIS message monitor. If an Ack operation on CAMS for HIS message monitor is performed to acknowledge this system alarm, the alarm status displayed on CAMS for HIS message monitor may be different from the status displayed on other operation and monitoring windows. To be specifically, when acknowledging a switchover or failover is performed, the system alarm is displayed on CAMS for HIS message monitor will be indicated as acknowledged. However, the same message displayed on a Faceplate view or a Tuning view will be displayed as not acknowledged. For displaying the status constantly among the windows, the same message needs to be separately acknowledged on the Tuning view. Nevertheless, it is better to avoid acknowledging the switchover alarm message for redundant UGS.

1.1.39 Unified Gateway Station (UGS2)

Notes on using UGS2 are explained here.

Dual-redundant Platform for Computer that can be used for computer switchover type UGS

For computer switchover type UGS, the revision of Dual-redundant Platform for Computer software to install varies depending on the revision of CENTUM VP software.

The following table shows the software revisions of CENTUM VP and their corresponding software revisions of Dual-redundant Platform for Computer.

Table 1.1.39-1 Software revision of CENTUM VP and software revision of Dual-redundant Platform for Computer

Software revision of CENTUM VP	Software revision of Dual-redundant Platform for Computer
R6.07.00	R2.01 or later
R6.06.00	R1.02 or later
R6.03.10 to R6.05.00	R1.01 or later

When you upgrade the revision of UGS2, you must upgrade the revision of Dual-redundant Platform for Computer first and then upgrade the revision of CENTUM VP software.

You can upgrade the Dual-redundant Platform for Computer software to the latest revision, regardless of the revision of CENTUM VP software.

If you install Redundancy Management Tool on HIS, ENG, or UGS2, install it from the CENTUM VP installation medium.

If you install Redundancy Management Tool on a management computer other than HIS, ENG, or UGS2, install it from the medium for Dual-redundant Platform for Computer R2.01 or later.

SEE ALSO For more information about installation procedures for Dual-redundant Platform for Computer, refer to:

B1.4, “Installation and initial settings of Dual-redundant Platform for Computer” in Dual-redundant Platform for Computer Setup (IM 30A05C30-01EN)

For more information about flow for building redundancy when using Dual-redundant Platform for Computer R2.01, refer to:

“■ Setup flow” in C1., “Installation and setup of AP integrated license products” in Dual-redundant Platform for Computer Setup (IM 30A05C30-01EN)

Limitation on the length of the domain name and the domain controller computer name when using UGS in a Windows domain

When you use a computer switchover type UGS in a Windows domain, there is a limitation on the length of the name of the Windows domain and the computer name of the domain controller.

SEE ALSO For more information about limitation on the length of a domain name and the computer name of a domain controller, refer to:

Dual-redundant Platform for Computer Read Me First (IM 30A01A20-01EN)

1.1.40 Precautions for Restrictions by Windows OS

This section explains precautions for restrictions by Windows OS.

■ Precautions for fonts that are not installed in Windows 10

In Windows 10, fonts installed by default are less than those in Windows 7 and Windows Server 2008 R2. If the previously created graphics or customizable faceplate contain fonts that are not installed in Windows 10, texts may be garbled or an indication may contain omitted characters.

TIP Please contact us for how to handle this problem.

■ Specifying the Windows fonts

Characters may be garbled or an indication may contain omitted characters in the following condition because different font types are installed in different Windows OS.

- When Windows OS is updated or when information is exchanged between different OSs, the fonts specified in the source of information are not installed to a computer running different OS.

You can specify the fonts in the following functions. If you update Windows OS, you must confirm if the specified fonts have some effects.

- Graphic
- Custom faceplate
- HIS settings
- CAMS for HIS message monitor

Change the failed fonts to restore.

■ Precautions for operating icons on the Start menu of Windows 10

This section describes precautions for Windows 10 operations by users who does not have permissions to run a program.

If a user who does not have permissions to run a program clicks its icon on the Start menu, the program does not run. No messages related to unable to run the program appear. Check the programs that each user group can run, and run the program with a user who has the permissions to run it.

SEE ALSO For more information about access permissions for programs, refer to:

"■ Access Permissions for Programs" in 3.1.1, "Access Permissions to Files and Folders" in CENTUM VP Security Guide (IM 33J01C30-01EN)

■ Precautions for program icons indicated on the start menu of Windows 10

After a user who does not have permissions to access to programs related to CENTUM goes to Start menu and expands CENTUM folder, program icons on the Start menu do not appear properly even though a user who has access rights operates the menu.

If program icons on the Start menu do not appear properly, you can restore them according to the following steps.

1. Start command prompt as a user with administrative rights.

2. Go to the folder that you want to restore the indication of icons below `C:\ProgramData\Microsoft\Windows\Start Menu\Program\`.

   Example: If you restore the indication of program icons below “CENTUM” folder by using C drive as the system drive.

   ```
   >cd c:\ProgarmData\Microsoft\Windows\Start Menu\Program\CENTUM
   ```

3. Enter the following command and execute.

   ```
   >COPY /B * +,,
   ```

   The date of updating shortcuts in the current directory is updated and program icons in the related folder appear properly.

TIP Conduct this work in folders that must be restored for example CENTUM online manual, CENTUM maintenance, Yokogawa AD Suite, Yokogawa License, YOKOGAWA Security, YOKOGAWA Redundancy, and others in addition to CENTUM folder.

Precautions for operating the start menu of CENTUM VP in Windows 10

A user who satisfies the following two conditions may not be able to select the start menu of CENTUM VP after CENTUM VP is installed.

- A user who had already signed in before CENTUM VP was installed
- A user who is not the Install User of CENTUM VP

If you cannot select the start menu of CENTUM VP, sign out and then sign in again. After that, you can operate the start menu of CENTUM VP.

Precautions for volume control on a computer running Windows 10

Do not change the volume on your computer if an audible beep is not generated. Beeps may not be emitted after the change.

If you change the volume on your computer, make the following operation.

- Show the volume adjustment window of the task tray and close it.

Precautions for specifying printer to be used for HIS in Windows 10

On the printer tab in HIS Setup window, do not specify Microsoft XPS Document Writer and Microsoft Print to PDF as the printer name.

When you print, mouse operations do not work on various views of HIS after the file dialog box to specify the file name appears.

Precautions for the indication of Browser Bar in Windows 10

If you allow the Browser Bar overlap, the indicated Browser Bar may be transparent.

Precautions when using the operation keyboard for single-loop operation in Windows 10

When using the operation keyboard for single-loop operation in a Windows 10 environment, disable virtual desktops for each user so as not to use any virtual desktops.

SEE ALSO For more information about the required procedure when not using virtual desktops in Windows 10, refer to:

"● Setting for When Not Using Virtual Desktops" in "■ Virtual Desktops" in B4.10.1, "Configuring on Windows 10" in CENTUM VP Installation (IM 33J01C10-01EN)

1.1.41 Precautions Related to Operation Environment

Precautions related to operation environment are provided as follows.

Precautions when CENTUM and other Yokogawa products run in the same computer

When CENTUM and other Yokogawa products run in the same computer, you must make the operation environment consistent among them.

SEE ALSO For more information about CENTUM VP operation environment, refer to:

A3., “Requirements for Operation” in CENTUM VP Installation (IM 33J01C10-01EN)

For more information about operation environment of YOKOGAWA products, refer to:

User’s Manuals of YOKOGAWA products

Precautions when user-created programs and components are used with Yokogawa components

When user-created programs and components are used with Yokogawa components, you must make the operation environment consistent between those programs and component and CENTUM VP.

SEE ALSO For more information about CENTUM VP operation environment, refer to:

A3., “Requirements for Operation” in CENTUM VP Installation (IM 33J01C10-01EN)

1.1.42 Others

Procedures to restrict Windows Explorer from starting when CENTUM Desktop is used

In Windows 10 and Windows Server 2016, you can start Windows Explorer from Windows Start menu in CENTUM Desktop environment.

TIP

You can use CENTUM Desktop if any of the following licenses are activated.

- Standard Operation and Monitoring Function
- Access Administrator Package (FDA:21 CFR Part 11 compliant)
- Access Control Package

The following OSs are affected.

- Windows 10 Enterprise 2016 LTSB (64-bit)
- Windows 10 IoT Enterprise 2016 LTSB (64-bit)
- Windows Server 2016 Standard

Follow these steps to restrict start of Windows Explorer from Windows Start menu in CENTUM Desktop environment on a computer running Windows 10 and Windows Server 2016.

Procedure 1: Confirm installation and license

1. Confirm that software such as ProSafe-RS or PRM that must coexist on the same computer are installed. If they are not installed, install the software.
2. Confirm that the required licenses have been distributed on the computer. If they are not distributed, distribute the licenses.

Procedure 2: Register the Start menu programs

Procedures to register the Start menu programs are different depending of whether the Standard Operation and Monitoring Function is installed.

TIP

You do not need to register System View, Recipe Builder, Report, and AD Organizer because they can be started from the tool buttons on the Browser bar of the Standard Operation and Monitoring Function.

- Procedure 2-a: Standard Operation and Monitoring Function is already installed
  If you register the Start menu programs to the preset menu of HIS, you can start the Start menu programs from the preset menu. Register to the preset menu as an operation and monitoring user only once for each HIS. An operation and monitoring user is the user who configured the HIS Start settings by using the HIS Utility. Follow these steps to register the Start menu programs to the preset menu.

1. Sign in to HIS as an operation and monitoring user.
2. From the Start menu, select the program and select [More] > [Open file location] in the right click menu.
   Windows Explorer appears with the shortcut for the program is selected.
3. Right-click on the selected shortcut and select Properties.
   The properties dialog box of the program appears.
4. Start the HIS Setup window.
5. Specify the following settings in the preset menu tab.
   - In [Function Type], select [Run the program by file name].

- Copy the path of the link for the Shortcut tab of the properties dialog box that appears in the procedure 2-a-3, and paste it to [Program Name].
- Copy the name of the shortcut selected in the procedure 2-a-2 and paste it to [Label Setup].

6. Click [Setup].
7. Click [OK].

IMPORTANT

You must register “Log Save” program and “Command Prompt” program by following the procedure from 2-a-2 to 2-a-5.

TIP

If you cannot set in the preset menu of HIS Setup window, assign the programs that you want to start to the function keys by using Function Key Assignment Builder.

- Procedure 2-b: Standard Operation and Monitoring Function is not installed
  You can start Start menu programs from the Task bar by showing Start menu programs on the Task bar. Follow these steps to show the Start menu programs on the Task bar.

  This work is required for each user respectively.

1. Sign in to the computer as the user who is to set CENTUM Desktop.
2. From the Start menu, select the program and select [More] > [Pin to taskbar] in the right click menu.
3. Confirm that the icon of the program appears on the Task bar.

Procedure 3: Set CENTUM Desktop

You must set CENTUM Desktop in a computer where any of Standard Operation and Monitoring Function, Access Administrator Package (FDA:21 CFR Part 11 compliant), or Access Control Package is activated. Follow these steps to set CENTUM Desktop to the computer.

1. Sign in to the computer as an administrator user.
2. Start HIS Utility or Access Control Utilities.
3. Set CENTUM Desktop for the applicable user.

Procedure 4: Hide Start menu programs

If you finish the works to register Start menu programs, you can delete the program folder of the Start menu. If you delete the program folder of Start menu, you can hide programs that appear on the Start menu. Follow these steps to delete the program folder of the Start menu.

1. Sign in to the computer that you register the Start menu programs as an administrator user.
2. Start Windows Explorer and delete the following folder.
   <The folder where CENTUM VP is installed>:`\CENTUMVP\his\save\HISUTY\CENTUM\Start Menu\Programs`
3. Sign out from the computer that you work.

TIP If you add or delete licenses by using License Manager or if you configure any of the following settings in HIS Utility or the User Environment Settings dialog box of Access Control Utilities, the Start menu is re-created. If the Start menu is re-created, delete the program folder of the Start menu again.

- CENTUM Desktop is set when a user is added in the environment settings for each sign in user.
- CENTUM Desktop is set when settings are changed in the environment settings for each sign in user.
- [Enable HIS Type Single Sign On] is selected in HIS Utility.
- [Rebuild Start Menu] is executed in HIS Utility.

Procedure 5: Install other software or add licenses

If you install other software such as ProSafe-RS or PRM or add licenses, you must register to preset menu or pin to taskbar. Follow these steps to register to preset menu or pin to taskbar.

1. Start HIS Utility and rebuild Start menu.
2. Follow the Procedure 2 to register the programs that are added to the Start menu to the preset menu or pin them to the taskbar.
3. Follow the Procedure 4 to hide the Start menu programs.

Regarding to Pre-Installed Software in Purchased General-Purpose PC

In a purchased General-Purpose PC with Windows operating system, many third party software applications are pre-installed. Some of the applications may conflict with CENTUM VP software. It is recommended to use the recovery medium to reinstall the system with simplest configuration if possible.

It is recommended to use the recovery CD to reinstall the system with simplest configuration if possible.

If customers want to setup the PCs by themselves, Yokogawa may provide technical support.

Cautions When Setting Printer

Some versions of printer drivers may not work properly, for more information about setting printer or troubleshooting of printers, please contact Yokogawa service office. The current version of printer driver support "Test print" for confirmation of printer settings.

Moreover, do not install the utilities and additional software programs come with the printer driver.

Changing printer settings

If you want to change printer settings, log on as an administrative user. And open the Properties dialog box of the printer, open the Advanced tab, and change the settings under Printing Defaults. If you change settings under "Printing Preferences" in the General tab page in the Properties dialog box, they are not reflected in printed messages.

Transparency of ActiveX Control

In CENTUM VP, a window is automatically created in the ActiveX Control area and you cannot create ActiveX Control with a transparent background. A rectangle in a background color of the size of ActiveX Control is shown.

ActiveX components created by user

If you use ActiveX components created in Visual Basic 6.0 for a graphic view, you must in advance verify their behavior in the graphic view. If the components do not function correctly in

the graphic view and the cause of the problem lies in the Microsoft product, you have to recreate the view with .NET components. (Microsoft discontinued its support for Visual Basic 6.0 and you cannot get technical support.)

Dialog box displayed by ActiveX components

If ActiveX components are used for a graphic view to display a dialog box and the dialog box is open, the graphic view may not show or the view may appear showing no content. If the view showing no content appears, close the dialog box and the content will be shown correctly. However, if the graphic view itself does not show, no workaround is available in some cases.

Notice on Using Panel Set with Exapilot ActiveX Controls

In full screen mode, if the panel set is used, and the main window is called simultaneously from the multiple graphic views that applied with Exapilot ActiveX controls, the following phenomena may occur:

1. The multiple views may be displayed as multiple tabs. Under this circumstance, the dialog box for initial display of Exapilot ActiveX controls cannot be operated. Sometimes, the main window is locked.
2. After clicking the Close button without activating the tabs, the main window may be closed with errors and then restarted. When multiple views are displayed in the panel set, the multiple graphic views that applied with Exapilot ActiveX controls should be treated as one view. When the problem occurs, you can restart the HIS (or logoff then logon the PC) or push Ctrl+Alt+Shift+ERASE keys together to restart the container window.

.NET component

If you place on a graphic a .NET component that uses System.Drawing.Bitmap class, an error is raised when the graphic view is shown.

To work around, do not use such a component.

1.2 Server for Remote Operation and Monitoring Function

How to implement the HIS-TSE server will be explained in this chapter.

1.2.1 Operating Messages

Since multiple clients can operate one HIS through HIS-TSE remote connection, and all the records are stamped by HIS-TSE server, the station names in the operation records are not clearly identifiable. To avoid the misunderstanding, the operation messages will not suffix the station name of the HIS-TSE server but the computer name of each client to the @ mark right after the message.

Example: FIC0001 Distillation Tower 1 Influx Flow MAN Old=AUT TSUSER@CLIENT

However, the following restrictions are applied:

The messages affixed with the computer names of clients are displayed on HIS-TSE server HIS only. When equalizing these messages to another HIS, same as on an ordinary HIS, the messages will be affixed with the station name of the HIS-TSE server.

Moreover, when a client logging off Windows, the operation message (No.0646) will be generated for the operation but the name of the client may be absent (such as indicated as TSUSER@).

1.2.2 Buzzer

Buzzer Sounding without Alarm Message

Buzzer may be initiated without any alarm message displayed in the window. This phenomenon may occur when a user with a restricted operation and monitoring range logs on. The reason that causes this phenomenon is that an alarm message such as a process alarm message, an operation guide message or a system alarm message is generated in a station that is beyond the operation and monitoring range of the user. Thus an alarm sound can be heard but no alarm message is displayed.

1.2.3 HIS-TSE Specific Restrictions

Comparing with standard HIS, HIS-TSE subjects to the following restrictions.

OPKB (operation Keyboard)

The operation keyboard OPKB cannot be used on either HIS-TSE server or HIS-TSE client.

Message Printout

On the HIS Setup window or HIS Constant Builder of HIS-TSE, the printer for message printout can be defined as a standard HIS, however, the message printout will not function properly so that it is recommended not to print out messages from HIS-TSE.

The messages that irrelevant to operation and monitoring scope (such as HIS Start or Database Download Complete) may be printed out but the messages from FCS such as system alarm and process alarm messages cannot be printed out.

1.2.4 Limit of Trend Views

The total capacity for displaying trend views in HIS-TSE is the same as in a standard HIS. So that the number of the trend views can be displayed at the same time is also limited.

The limit of the trend views with the trend graphs from local or other HISs can be displayed is 50 which including the windows displayed on both server and client PCs.

If this limit is exceeded, the trend data and graphs cannot be properly displayed in the trend views. In this case, some trend views should be closed.

In the graphic view, a trend primitive is counted as a trend view so that when creating the graphic views, putting many trend primitives into a graphic view should be avoided

1.2.5 HIS-TSE Client Specific Restrictions

The HIS-TSE client subjects to the following restrictions. Moreover, when running a task such as calling a window(O△window name) or program execution(F△program name) with the scheduler or sequence message request, HIS must be running on the HIS-TSE server.

△: Space

Tasks Requested from Scheduler

The tasks requested from the scheduler can be running only on the HIS-TSE server.

Tasks Requested from Sequence Message Request (%RQ)

The tasks requested from the sequence message request can be running only on the HIS-TSE server.

Panel Set

The panel set can be displayed only on HIS-TSE server.

Other HIS Window Call

When calling a window of other HIS, the called window can be displayed on the HIS-TSE server only.

When calling other HIS window from client, the option -A will not function. The following command scripts can be used for calling window.

S△HIS0163 (No Option)

S△HIS0163△-S

S△HIS0163△K△ERAS (K: system function key, ERAS: script of system function key)

△: Space

Message Triggers Window Opening

If the message is used to trigger opening a window, the window will be displayed on HIS-TSE server only.

Using PDA(Personal Digital Assistance)

When using a PDA as the HIS-TSE client, the computer name of the PDA should be less than 7 characters. If 8 or more characters are used for the PDA computer name, the remote terminal server of Windows cannot obtain the PDA computer name. The station name for the operation and monitoring message from the PDA will be absent.

Using Remote Desktop Connection to HIS-TSE Server

In a case that HIS-TSE client is Windows10, prolonged sound generation after making remote desktop connection to HIS-TSE server causes a memory leak at the remote desktop connection and the remote desktop connection is lost.

Steps to avoid disconnection of remote desktop connection are provided as follows:

- Change the HIS-TSE client to Windows 7.
- Turn off all sounds including the sounds other than operation and monitoring function.
- Restart remote desktop connection on a routine basis.

Steps to mitigate disconnection of remote desktop connection by using operation and monitoring function are provided as follows:

- Stop the buzzer on a routine basis.
- From the Type in Buzzer tab of HIS Setup window, select [One-shot].

When you restore the connection, make the remote desktop connection to HIS-TSE server again.

1.2.6 Restrictions On Process Management

When applying Process Management with the remote operation and monitoring function, it subjects the following restrictions.

Configuration of Process Management

When configure the HIS-TSE server on Process Management, the PC should be configure as a client station.

If it is configured as a server, the batch-linked trend or the formulae cannot be generated for the batch-related windows(.RO) of the HIS-TSE server or client.

Data Bindings of Graphic Views

When use the graphic generic names "@RecipeUnit()/@RecipeBatchID()" bindings to display the batch-related graphic views on HIS-TSE server and clients while the number of displayed batch-related windows (.RO) exceeds the limit, the data bound to "@RecipeUnit()/@Recipe-BatchID()" are displayed as follows:

Character String : "@RecipeUnit()"/"@RecipeBatchID()"

Numeric String : "0"

Display Recipe Related Windows on Remote Operation and Monitoring Console

The remote operation and monitoring server has a limit for displaying recipe related windows on remote console due to a limit for internal resource. When the number of displayed resources exceeds the limit, the batch data will not be displayed on the later opened windows.

The number of resources required for each window is shown in the table below. The total number of resources must be 29 or less.

Table 1.2.6-1 Number of Resources Repuired for Each Winoow

Windows	Number of resources	Additional resource required for operation
Browser Bar	1	
Graphic View (Contains Recipe Data Only)	1	
Product Overview	2	Sort +1, Filter +1, Data Entry +1
Recipe Procedure View /Unit Recipe Procedure View	2	
Product Control View	1	
Recipe List Dialog Box	1	
Master Recipe	1	Data Entry +1
Master Recipe Equipment Requirement Dialog Box	1	
Reference Batch Selection Dialog	1	
Copying A Control Recipe	1	
Exporting A Formula	1	
Recipe Header Dialog Box	1	
Control Recipe Formula Dialog Box	1	Data Entry +1

Continues on the next page

Table 1.2.6-1 Number of Resources Repuired for Each Winoow (Table continued)

Windows	Number of resources	Additional resource required for operation
Unit Formula Dialog Box	1	Data Entry +1
Array Data Dialog Box	1	Data Entry +1
Control Recipe Equipment Requirement Dialog Box	1	Unit Assignment/Download/Start/ Print Batch Report +1
Operator Memorandum Dialog Box	1	
Trend View Selection Dialog Box	2	
Server Switch Dialog Box	1	

1.2.7 Cautions on Applying Exaopc OPC Interface Package (for HIS)

When applying Exaopc OPC Interface Package (for HIS), the security policies are different from the standard HIS. Though the access privileges are the same, HIS-TSE cannot use HIS constants to get the group information from Open Interface tab of HIS constants builder, thus the operation and monitoring range becomes different.

For this reason, the application created on standard HIS should be tested on HIS-TSE when applying the OPC interface to HIS-TSE.

OPC Security

The differences of OPC security between HIS-TSE and standard HIS are as follows:

- HIS-TSE

Access Privilege:	The access privilege of the user set with OPC Security interface (valid for all sessions).
Operation and Monitoring Range:	The range of the group that the user set with OPC Security interface belongs to.

- Standard HIS

Access Privilege:	The access privilege of the user set with OPC Security interface (valid for all sessions).
Operation and Monitoring Range:	The range of the group specified in the Open Interface tab of HIS constants builder.

ActiveX Control Securit

The security policies when accessing the ActiveX controls in the graphic views from the OPC server are as follows:

- HIS-TSE

Access Privilege:	The access privilege of the currently login user (each session is unique).
Operation and Monitoring Range:	The range of the group that the currently login user belongs to.

- Standard HIS

Access Privilege:	The access privilege of the currently login user.
Operation and Monitoring Range:	The range of the group specified in the Open Interface tab of HIS constants builder.

1.2.8 CENTUM user if [Legacy Model] is selected in Security Setting Utility

In Security Setting Utility, if you select [Legacy Model], CENTUM user is not automatically created in the Remote Desktop Users group. Manually add CENTUM user to the Remote Desktop Users group.

1.3 Connecting to a CS Project Installed with both Enet and Ethernet

When a CENTUM VP project is connected to a CS project, the problems described in this section may occur. How avoid these problems regarding to CENTUM VP and CS engineering on Windows, EWS and the operating systems are explained as follows.

1.3.1 Problems

Error Occurs when Loading System Configuration from EWS to HIS

After downloading system configuration from EWS, error message may occur in EWS, or even the downloading is indicated successful in EWS, the error messages such as "Database Download Error" or "Different Project" may occur in HIS. The cause of this phenomenon is that the CS project host computer has both Enet and Ethernet, it is necessary to confirm the following points when connecting HIS or Exaopc to the CS project on the Ethernet.

- Set the HIS and Exaopc station information on EWS system configuration builder, and save the information into hosts files.
- If PICS is used, directly write the HIS and Exaopc hostnames and IP addresses to the hosts file.
- Set the hostname and IP address the connected EWS Enet to the project connection configuration file in CENTUM VP project.
- Add the routing information regarding to the HIS and Exaopc.

HIS and ICS cannot Access Each Other's Trend Data

For displaying the trend data from each other, HIS and ICS need to be placed on the same network. If the two stations are configured correctly on the same network, the data can be accessed with following settings.

- Access ICS Trend Data from HIS
  Specify the [Other Station Name] on the trend block properties sheet with the hostname of the ICS. Comparatively, if the CENTUM VP HIS accesses the trend data from another HIS, the station name of this "another HIS" should be set to [Other Station Name] of the trend block properties sheet.

Batch Data of the Project on ICS Cannot be Accessed on HIS

When ICS has Ethernet connection and Enet of ICS is connected to the Ethernet of HIS (Sample 3-b), batch data of the project on ICS cannot be accessed from HIS.

In this case, you can enable access to batch data of the project on ICS from HIS by adding an Eddss entry to the hosts file and setting the Enet IP address of ICS.

Setting Samples

A few setting samples with explanations are shown as follows.

- Sample 1: Extend CS Ethernet; Connect HIS/Exaopc on the Ethernet; ICS with Ethernet
- Sample 2: Add Ethernet to CS system; Connect HIS/Exaopc on the Ethernet; ICS without Ethernet
- Sample 3-a: Extend CS Enet; Connect HIS/Exaopc on the Enet; ICS without Ethernet
- Sample 3-b: Extend CS Enet; Connect HIS/Exaopc on the Enet; ICS with Ethernet

1.3.2 Sample 1: Extend CS Ethernet; Connect HIS/Exaopc on the Ethernet; ICS with Ethernet

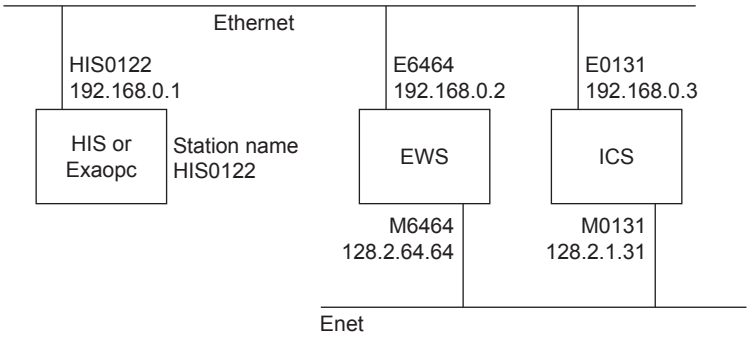

Figure 1.3.2-1 Sample 1

Points on setting hostname and IP address are as follows.

Downloading from EWS

- Project Connection Settings on CENTUM VP
  Set the following on Multiple Project Connection Builder:
  Hostname: M6464 (Hostname in CS Project)
  IP Address: 128.2.64.64
- Routing Information on HIS
  The setting is performed in the [Command Prompt] window on HIS/Exaopc.
  Logon with Administrator's privilege and type the following command:

```
C:\route -p add 128.2.64.64 192.168.0.2
```
(*1)

*1: In the above command script, 128.2.64.64 is the IP address of EWS on Enet. 192.168.0.2 is the IP address of EWS on Ethernet.

For more information about checking and deleting the routing information, type "route /?" for help.

Trend Data from Other Station

- When HIS accesses the trend data from ICS
  Set the following on trend block properties sheet
  Other Station Name: E0131 (ICS hostname on Ethernet)

1.3.3 Sample 2: Add Ethernet to CS system; Connect HIS/ Exaopc on the Ethernet; ICS without Ethernet

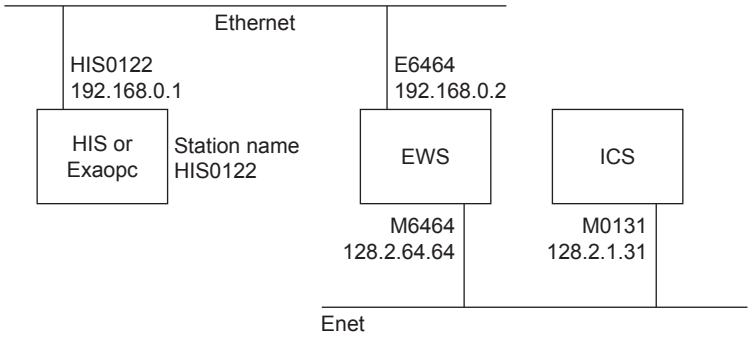

Figure 1.3.3-1 Sample 2

Points on setting hostname and IP address are as follows.

Downloading from EWS

- Project Connection Settings on CENTUM VP
  Set the following on Multiple Project Connection Builder:

  Hostname: M6464 (Hostname in CS Project)

  IP Address: 128.2.64.64

- Routing Information on HIS
  The setting is performed in the [Command Prompt] window on HIS/Exaopc.

  Logon with Administrator's privilege and type the following command:

  ```
  C:\>route -p add 128.2.64.64 192.168.0.2
  ```
  (*1)

  *1: In the above command script, 128.2.64.64 is the IP address of EWS on Enet. 192.168.0.2 is the IP address of EWS on Ethernet.

For more information about checking and deleting the routing information, type "route /?" for help.

Trend Data from Other Station

It is not possible to collect trend data from ICS since the HIS and ICS are not configured in the same network.

1.3.4 Sample 3-a: Extend CS Enet; Connect HIS/Exaopc on the Enet; ICS without Ethernet

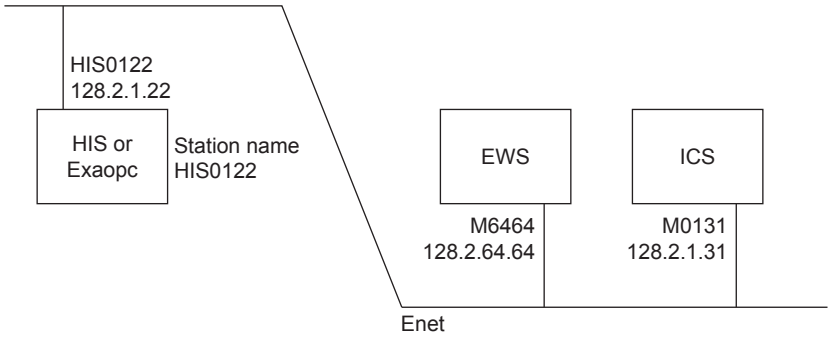

Figure 1.3.4-1 Sample 3-a

Points on setting hostname and IP address are as follows.

Downloading from EWS

- Project Connection Settings on CENTUM VP
  Set the following on Multiple Project Connection Builder:

  Hostname: M6464 (Hostname in CS Project)

  IP Address: 128.2.64.64

- Routing Information on HIS
  In this configuration, routing is not required.

Trend Data from Other Station

- When HIS accesses the trend data from ICS
  Set the following on trend block properties sheet

  Other Station Name: M0131 (ICS hostname on Enet)

- When ICS accesses the trend data from HIS
  Set the following on trend block properties sheet

  Other Station Name: HIS0122 (HIS station name)

  Set the IP address of HIS0122 on Ethernet for TCP/IP protocol settings.

  Ethernet IP Address: 128.2.1.22

1.3.5 Sample 3-b: Extend CS Enet; Connect HIS/Exaopc on the Enet; ICS with Ethernet

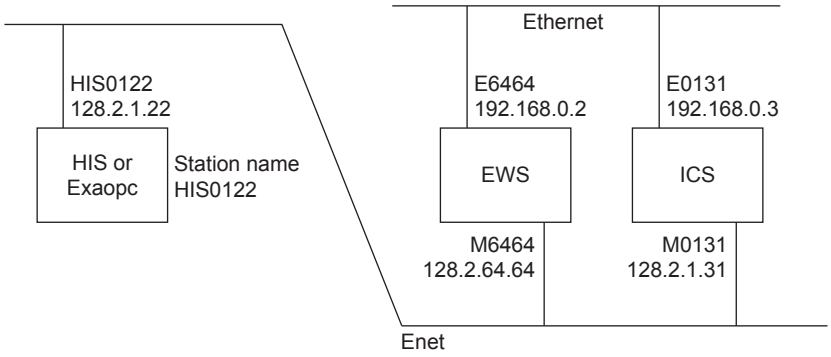

Figure 1.3.5-1 Sample 3-b

Points on setting hostname and IP address are the same as for Sample 3-a.

Batch Data Access

To access batch data of the project on ICS from HIS, add an Eddss entry to the hosts file in the following location of HIS and set the Enet IP address of ICS.

`<Windows installation folder>\system32\drivers\etc\hosts`

Example: 128.2.1.31 E0131

After you modified the hosts file, restart the HIS.

1.4 Connection of Multiple Computers in Windows Environment

This section describes the behaviors that are associated with connecting five to eight computers in Windows 7.

1.4.1 Behaviors associated with connecting five to eight computers in Windows 7

When FCS maintenance is performed, HIS equalization may start. Within a period of time (up to 45 seconds) after equalization is carried out to all HISs, the following problems may occur. However, the problems are trivial, they can be resolved by retrying the operations without introducing the server version of Windows. Nevertheless, it is necessary to understand the details of the problem, and evaluate again whether the server version Windows should be applied.

Table 1.4.1-1 Behaviors associated with connecting five to eight computers in Windows 7

Category	Description	Avoid	Recover
HIS	Equalization Communication retry may occur so that additional time (about 10 seconds) is required.	None	
	Status Display Part of ST16, SFC and SEBOL cannot be properly displayed, error prompt may appear.	None	Retry
	Long-Term Trend Error occurs when accessing long-term trend in other station in which project database is stored.	Do not save long-term trend in PjtPC. (*1)	Retry
Computer installed with System Generation Functions	Download Recipe from Recipe View Download aborted due to sharing name CTMRMNG check error.	Do not use PjtPC (*1) as Recipe PC (*2).	Retry
	Audit Trail Audit Trail (audit records log, modification log) may fail.	Do not use PjtPC (*1) as the computer to which the audit trail database is stored.	None (However, it does no harm to the project)
Batch Process Management	Exporting Formula Error occurs when referencing recipe.	Do not use PjtPC (*1) as the batch server computer.	Retry
	Copying Control Recipe Error occurs when referencing an erroneous file. The error is not notified to client.		
	Creating Batch Linked Trend File Creating CSV file on master server may fail.		

*1: The computer on which the project database is resided is referred to as PjtPC.
*2: The computer on which the recipe database is resided is referred to as Recipe PC.

1.4.2 Resolution

The fundamental resolution for solve the problems is explained as follows.

- Start as few PCs with system builders as possible for engineering. The number of PCs should not exceed the limit. The shared printer must be placed to the PC where the project data is not resided.
- Prepare a PC and install Windows server version in it. Use this PC for holding the data of project.
- Use the PC where the project data is not resided to provide Batch server services.
- Use the general-purpose PC where the project data is not resided to hold audit trail database.
- If many general-purpose PCs are subject to audit trail, it is better to have a PC for holding the project data, and have a PC with Windows server installed to hold the audit trail database.

1.5 Cautionary Notes on Using CENTUM VP on a Virtual Machine

This section provides cautionary notes on using CENTUM VP on a virtual machine.

Instruction on setting up a virtual machine on the virtualization platform

When you install software on a virtual machine on the virtualization platform, replace “Insert the xxx software medium into the drive.” with “Mount the ISO format file of the xxx software on the virtual machine by using Hyper-V Manager.” as you read the descriptions of procedures.

Virtualization platform available in CENTUM VP

The following table shows the software revision of CENTUM VP and its corresponding software revision of virtualization platform.

Table 1.5-1 Software revision of CENTUM VP and software revision of virtualization platform

Software revision of CENTUM VP	Software revision of virtualization platform
R6.06.00 to R6.07.00	R1.01.00

1.5.1 Resources Required for a Virtual Machine

This section describes resources required for a virtual machine in the following circumstance.

- Resources of a virtual machine required to run each function

Resources of a virtual machine required to run each function

The following table shows estimated resources required to run each function on a virtual machine.

Table 1.5.1-1 Estimated resources required for a virtual machine

Function	Number of CPU core	Memory size (GB)	Hard disk space (GB)	Hard disk access speed (MB/s)
AD Organizer	4	8	80	32
AD Server	4	8	80	32
HIS (without Multiple-monitor Support Package) 1 graphic view	2	4	40 (*1)	16
HIS (without Multiple-monitor Support Package) 2 to 5 graphic views	3	4	40(*1)	16
HIS (with Multiple-monitor Support Package) 1 to 4 graphic views	3	4	40(*1)	16
HIS (with Multiple-monitor Support Package) 5 to 12 graphic views	4	4	40(*1)	16
Server for remote operation and monitoring (Number of client PCs that can be simultaneously connected: Up to four)	6	6	40(*1)	16
Server for remote operation and monitoring (Number of client PCs that can be simultaneously connected: Up to eight)	12	8	45(*1)	16
CAMS for HIS	4	5	90	24
SOE	2	4	50(*1)	16
SIOS	2	4	40	16
System builders (*2)	2	4	80	32
VP Graphic Builder	2	4	80	32
Recipe Builder	2	4	80	32
License Server	2	4	80	16
File Server (*3)	2	4	80	32
Virtual environment of FCS simulator (Simulator x 4)	2	4	-	16
Real machine environment of FCS simulator (Simulator x 8)	3	4	-	16

*1: If you use the long-term data archive function, you must expand hard disk space depending on the storage period.
*2: CAMS for HIS Builder is included.
*3: Specification is the same when you use system builders only, AD Suite only, or both system builders and AD Suite.

TIP

For how to estimate resources required for a virtual machine for specific combinations of functions, contact YOKOGAWA.

1.5.2 Restrictions Different from Physical Machines

When you use virtual machines, applied restrictions on specifications are different from those for physical machine environments. This section describes restrictions for respective functions.

Following types of restrictions on specifications are applied to respective functions.

- Difference between a virtual machine and a physical machine
  When a subsystem runs in a virtual machine, its function is more limited than it runs in a virtual machine.
- Restrictions on specification caused by the virtualization functions
  This type of restriction is applied to subsystem functions when functions specific to virtualization run. For example, failover and live migration are functions specific to virtualization.
- Specifications to run many virtual machines
  Those specifications intend to run more virtual machines in virtualization.

SEE ALSO For more information about how to setup a virtualization platform-based CENTUM VP system, refer to:

A2.2.2 “Setup Procedure for a Virtualization Platform-based CENTUM VP System” in CENTUM VP Installation (IM 33J01C10-01EN)

For more information about how to set up a virtualization environment, refer to:

B8. “Setting Up a Virtualization Environment” in CENTUM VP Installation (IM 33J01C10-01EN)

HIS type single sign on

Restrictions on specifications are applied to run in a virtual server.

- Do not use HIS type single sign on function on HIS.
  If you connect remotely after you start HIS, windows may not be displayed properly due to the number of display or difference in display resolution even though you set HIS type single sign on.

FCS simulator

On a virtual machine where you run an FCS simulator that can be operated through remote connection from another HIS by installing the Expanded Test Functions and FCS Simulator Package, set both the domain number and the station number to 0.

HIS download

There are differences between a virtual machine and a physical machine.

- HIS download to a virtual machine by using System View takes four times as long as a download to a physical machine if the disk access speed is 16 MB/s. If the data access speed is 24 MB/s, HIS download takes three times as long as that for a physical machine.

SOE server

There are differences between a virtual machine and a physical machine.

- HIS and SOE server cannot coexist. You must configure a virtual machine where only SOE server runs. In this case, do not install Vnet/IP communication software.

HIS-TSE server

There are differences between a virtual machine and a physical machine.

- HIS-TSE server and SENG cannot coexist.

- You cannot run operation and monitoring function in HIS-TSE server because you use the HIS-TSE server by connecting from a thin client.

TIP HIS-TSE server and SENG can coexist in a physical machine, whereas operations are prohibited on SENG that is using remote desktop connection to HIS-TSE server.

Report

There are differences between a virtual machine and a physical machine.

- You cannot use the copy tool for report.

UGS

There are differences between a virtual machine and a physical machine.

- You must separate domains to place a virtual Vnet/IP station and computer switchover type UGS.
- You cannot use following tools to browse from a virtual machine to lower-level controllers that have IP address in a range between 192.168.0.0 and 192.168.255.255.
  - Block Attributes Uploader
  - OPC Browse
  - IEC61850 Browse

SIOS

There are differences between a virtual machine and a physical machine.

- You cannot run OPC browse from a virtual machine to OPC servers that have IP address in a range between 192.168.0.0 and 192.168.255.255.

Failover

There are restrictions on running a failover depending on the type of stations and their functions.

Table 1.5.2-1 Restrictions on running a failover

Station type and function	Restrictions
AD server	If a failover runs while the data is being written to AD server, AD project may be corrupted.
VP Builder	If a failover runs during an online download to FCS, further online download may not be available.
SIOS Builder	• If a failover runs during OPC browse or during automatic tag generation, the result of OPC browse or automatic tag generation fails. Run again after the switch over is complete. • If a failover runs during an online download or offline download, you must run offline download again after the switch over is completed.
SIOS station	• If a failover runs during an online download or offline download, you must run offline download again after the switch over is completed. • The station is in Fail status during the switch over.
UGS Builder	• If a failover runs while BCV operation marks are being saved, the result of saving BCV operation marks fails. Run again after the switch over is complete. • If a failover runs during an online download or offline download, you must run offline download again after the switch over is completed.

Continues on the next page

Table 1.5.2-1 Restrictions on running a failover (Table continued)

Station type and function	Restrictions
HIS	Acquired data or alarms may be lost during failover.
CAMS for HIS	After the start of HIS due to a failover, more than ten minutes may be required to notify new messages on CAMS for HIS message monitor. You may not be able to restore the state of message for running HIS on CAMS for HIS message monitor.
Test function	If a failover runs while test function is running, the test function may not run properly. If a failover runs while test function is running, restart the test function after the switch over is complete.

Exaopc OPC interface package (for HIS)	• While fail over is running, you cannot connect from OPC client. Try to connect after the switch over is complete.
	• If a failover runs, connection is terminated. Try to connect again after switch over is complete.
	• After switch over is complete, reconnect user applications and re-configure AddItem and others.
	• If following connections are satisfied for OPC client that is installed by using CENTUM data access library, you must restart the OPC client and reconnect after switch over is complete.
	  • An OPC client that executes EventRqst method and receives notification of alarm events
	  • An OPC client that executes ShutdownRqst method and receives a shut down notification

Live migration

There are restrictions on running a live migration depending on the type of stations and their functions.

Table 1.5.2-2 Restrictions on running a live migration

Station type and function	Restrictions
VP Builder	Do not run a live migration during offline download to FCS.
SIOS Builder	Do not run a live migration during online download, offline download, or OPC browse.
SIOS station	• Do not run a live migration during online download or offline download. • An alarm for disconnection of OPC server may be generated during a live migration.
UGS Builder	Do not run a live migration during online download, offline download, or saving BCV operation marks.
HIS	Acquired data or alarms may be lost during a live migration.
CAMS for HIS	• Messages generated during a live migration may not be able to be received on CAMS for HIS message monitor. • Do not operate CAMS for HIS message monitor during a live migration. What you operate may not be reflected otherwise.
Test function	If a live migration runs while test function is running, the test function may not run properly. If a live migration runs while test function is running, restart the test function after the switch over is complete.
Exaopc OPC interface package (for HIS)	• During a live migration, connection may not be available from OPC client. Try to connect after the switch over is complete. • During a live migration, a timeout error may occur for method call. • During a live migration, acquisition of data or messages may fail.

Shared storage

Restrictions are applied on switching the path for shared storage depending on the type or function of stations.

Table 1.5.2-3 Restrictions on switching the path for shared storage

Station type and function	Restrictions
HIS	You may not be able to operate on operation and monitoring window while the path for shared storage is being switched. The acquired data or alarms are not updated and loss of acquired data may occur.
UGS Builder	Execution of UGS Builder and tools may be interrupted while they are running. The interrupted behaviors resume after the switch of the path for shared storage is complete.
CAMS for HIS	While the path for shared storage is being switched, new messages are not notified to CAMS for HIS message monitor. Operations may not be available on CAMS for HIS message monitor.
Test function	Start of test function may fail while the path for shared storage is being switched.
Exaopc OPC interface package (for HIS)	Response to a method may not be returned while the path for shared storage is being switched. In this case response is returned after the switch of the path for shared storage is complete.

Link transmission

Restrictions on specifications are applied to run in a virtual server.

The link transmission mentioned here contains the link transmission between virtual domains.

- A virtual Vnet/IP station cannot send or receive link transmission (scan transmission). If you want to refer to global switches in other stations, you must refer to a link transmission information that defines station name.
- A virtual Vnet/IP station does not support link transmission. If you want to refer to the value of global switch from application functions such as graphics in a virtual Vnet/IP station, add actual domain number and station number to refer.
  Example:

  Use %GS00101S0101 to refer %GS001 of the station number 1 from FCS0101.

TIP

You can normally run scan transmission between stations that are not virtualized in Vnet/IP network that virtual Vnet/IP stations are connected.

Automatic logon

There are differences between a virtual machine and a physical machine.

- Automatic logon function is not available on a virtualization server HIS. If you connect remotely after you start HIS, windows may not be displayed properly due to the number of display or difference in display resolution. Automatic logon function at remote connection is available on a virtualization server HIS. By using this function, remote desktop opens automatically when you log on to thin client and you can log on to the predefined virtual machine.

1.5.3 Thin Client

Restrictions on using OPKB in thin client

If you specify other than operation keyboard for Buzzer Switching on Buzzer tab sheet in HIS Setup window to output sound to thin client by using OPKB, a memory leak occurs on thin client and the thin client may abort.

If the thin client aborts, restart it.

To avoid this, specify operation keyboard on Buzzer tab sheet in HIS Setup window.

Appendix 1. System Revisions where I/O Modules were Introduced

You can refer to this appendix to find out which I/O module was introduced in which system revision.

Lists of System Revisions where I/O Modules were Introduced

This section provides lists of system revisions where various types of I/O modules were introduced.

TIP

For more information about the names of I/O modules, refer to Input & Output Modules Vol.1 (IM 33J60F10-01EN) and Input & Output Modules Vol.2 (IM 33J62F10-01EN).

Analog/Digital I/O Module

Table Appendix 1-1 System revision where analog/digital I/O module was introduced

Model	Name	R6.01.00	R6.03.00
A2MMM843	Analog Digital I/O Module (16-Channel, Isolated)	X	
A2MDV843	Digital I/O Module (16-Channel, Isolated)	X	
A2MME041	16-Channel Individually Configurable Analog I/O		X

Analog I/O Modules

Table Appendix 1-2 System revisions where analog I/O modules were introduced

Model	R3.01.00	R3.02.00	R3.03.00	R3.04.00	R3.05.00	R4.01.00	R4.03.00
AAI141	X	X (*1)					
AAV141	X						
AAV142	X						
AAI841	X	X (*1)					
AAB841	X						
AAV542	X						
AAI143			X				
AAI543			X				
AAB842							X
AAV144				X			
AAV544				X			
AAT141	X						
AAR181	X						
AAI135	X	X (*1)					
AAI835	X	X (*1)					
AAT145	X						
AAR145	X						
AAP135	X						

Continues on the next page

Table Appendix 1-2 System revisions where analog I/O modules were introduced (Table continued)

Model	R3.01.00	R3.02.00	R3.03.00	R3.04.00	R3.05.00	R4.01.00	R4.03.00
AAP149		X					
AAP849					X		

*1: With HART communication

Digital I/O Modules

Table Appendix 1-3 System revisions where digital I/O modules were introduced

Model	R3.01.00	R3.03.00	R3.04.00
ADV151	X	X (*1)	
ADV141	X		
ADV142	X		
ADV157	X		
ADV161	X		
ADV551	X		
ADR541	X		
ADV557	X		
ADV561	X		
ADV859	X		
ADV159	X		
ADV559	X		
ADV869	X		
ADV169	X		
ADV569	X		
ADV851			X

*1: SOE

Communication Modules and Other Modules

Table Appendix 1-4 System revisions where communication modules and other modules were introduced

Model	R3.01.00	R3.02.00	R3.03.00	R3.04.00	R4.01.00	R5.01.00	R6.07.00
ALR111	X		X (*1)				
ALR121	X		X (*1)				
ALE111		X	X (*1)				
ALF111	X						
ALP111				X			
ALP121						X	
ASI133			X				
ASI533			X				
AST143			X				
ASR133			X				
ASD143			X				
ASD533			X				

Continues on the next page

Table Appendix 1-4 System revisions where communication modules and other modules were introduced (Table continued)

Model	R3.01.00	R3.02.00	R3.03.00	R3.04.00	R4.01.00	R5.01.00	R6.07.00
AGS813					X		
AGP813					X		
A2LP131							X

*1: Remote node installation was supported.

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Revision Information

Title : CENTUM VP Release Information
Manual No. : IM 33J01A50-01EN

Aug. 2019/9th Edition/R6.07 or later

The following sections have been added:

- ■ Limitation on displaying the Module rule execution required icon
- ■ Cautionary notes on font color
- 1.1.9, “UACS Alarm Management”
- ■ Cautionary notes on printing reports to PDF files
- ■ Behaviors of inter-station data link
- ■ Precautions for operating icons on the Start menu of Windows 10
- ■ Precautions when connecting A2LP131 and PROFINET IO-Device with an Ethernet cable
- 1.1.32, “PROFINET Communication Module (A2LP131)”

The following items have been updated:

- ■ Usage Notes for R6.07
- 1.1.1, “Note on Using PC”
- ■ Notices on Station Number Becomes Smallest
- ■ Regarding 497-day uptime of Computers and Servers
- ■ Software Revision of Automation Design Suite Installed into CENTUM VP Software
- ■ Width of Double-Byte Space and Single-Byte Hyphen Characters
- ■ COM Port Number in HIS (with Extended RS Card Installed)
- ■ Flag of Momentary Power Failure
- ■ Shutdown Operation
- ■ Dual-redundant Platform for Computer That Can Be Used for Computer Switchover Type UGS
- ■ Precautions for fonts that are not installed in Windows 10
- ■ Virtualization platform available in CENTUM VP
- ■ Lists of System Revisions where I/O Modules were Introduced

The following items have been deleted:

- ■ Notice on Creating Buttons on WinForm
- ■ Regarding Monochrome Printout from HIS Hardcopy Device
- ■ Print Reports
- ■ System Alarm Output when SIOS is Shut down or Started
- ■ Precautions for defining I/O address of Modbus data items

Aug. 2018/8th Edition/R6.06

The following sections have been added:

- ■ Precautions for using Legacy model in Windows 10 or Windows Server 2016
- ■ Version of control logic in a class module
- ■ Precautions for Using Touch

- ■ Precautions for connecting a monitor to a computer
- ■ Precautions related to showing CAMS for HIS message monitor
- ■ EventRqst/ShutdownRqst Method in CENTUM Data Access Library Does Not Run Properly and Alarm Events or Shut Down Events May Not Be Notified
- ■ Precautions for defining I/O address of Modbus data items
- ■ Specifying the Windows fonts
- 1.1.39 “Precautions Related to Operation Environment”
- ■ Procedures to restrict Windows Explorer from starting when CENTUM Desktop is used
- ■ Using Remote Desktop Connection to HIS-TSE Server
- 1.5 “Cautionary Notes on Using CENTUM VP on a Virtual Machine”

The following items have been updated:

- ■ Software Revision of Automation Design Suite Installed into CENTUM VP Software
- ■ Cautions on moving a view or window in the HIS that multiple monitors are used
- ■ FCS CPU Idle Time
- ■ Dual-redundant Platform for Computer That Can Be Used for Computer Switchover Type UGS

The following items have been deleted:

- ■ Precautions When Editing Files by Using AD Organizer
- ■ Precautions when testing a class module or application module
- ■ Notes on the Error Dialog Box That Appears When IT Security Configuration is Completed
- ■ Adding PDF Port for Self-Documentation
- ■ Detail hardware information monitoring function of Redundancy Management Tool

Nov. 2017/7th Edition/R6.05

The following item has been added:

- ● Restoration Procedure When [Reinstall using recommended settings] Was Selected
- ■ Precautions When CENTUM VP and ProSafe-RS Are Installed on the Same Computer
- ■ Precautions When AD Organizer of R6.04 or Earlier Version Is Present in the System
- ■ Precautions when testing a class module or application module
- ■ Alias statements in the expressions of CALCU and CALCU-C
- ■ Notes on Graphics Display When the Revision of HIS is Old
- ■ Output range tracking of BSETU-2/BSETU-3 blocks

The following items have been updated:

- ■ Software Revision of Automation Design Suite Installed into CENTUM VP Software
- ■ Change Filter Attributes

The following items have been deleted:

- ■ Cautions when Defining System Alarm Messages
- ■ Operation Guide Messages
- ■ Notice on Downloading Failure Due to Open Bus (Ethernet) Communication Error
- ■ CAMS for HIS Message Monitor Details Pane
- ■ Configuration When Generating Reports on a Computer Where Only the Report Package Is Installed

- ■ Precautions about document generation in Windows 10

Apr. 2017/6th Edition/R6.04

The following item has been added:

- ■ Software Revision of Automation Design Suite Installed into CENTUM VP Software
- ■ Precautions When CENTUM VP Standard Engineering Function Coexists with ProSafe-RS Safety System Engineering and Maintenance Function
- ■ Precautions When Managing Automation Design Projects of CENTUM VP and ProSafe-RS by Using a Computer that Automation Design Server Is Installed
- ■ Precautions When Starting by Using Microsoft Excel 2016
- ■ Notes on Installing ProSafe-RS Safety System Engineering and Maintenance Function
- ■ Notes on Installing Exasmoc R4.03.00/Exarqe R4.03.00
- ■ Notes on Changing Security Model in the File Server
- ■ Notes on Users Who Configure IT Security Settings in the File Server and the Domain Controller
- ■ Notes on the Error Dialog Box That Appears When IT Security Configuration is Completed
- ■ Detail hardware information monitoring function of Redundancy Management Tool
- ■ Precautions for fonts that are not installed in Windows 10
- ■ Precautions for program icons indicated on the start menu of Windows 10
- ■ Precautions for operating the start menu of CENTUM VP in Windows 10
- ■ Precautions for volume control on a computer running Windows 10
- ■ Precautions for specifying printer to be used for HIS in Windows 10
- ■ Precautions for the indication of Browser Bar in Windows 10
- ■ Precautions about document generation in Windows 10
- ■ Precautions when using the operation keyboard for single-loop operation in Windows 10
- ■ Precautions for starting the SOE server in Windows 10

The following items have been updated:

- ■ RAS sftware settings
- ■ Configuring Windows Not to Join the Customer Experience Improvement Program (CEIP)
- ■ Precautions When Using the Dependency Analyzer
- ■ ActiveX Control Object in the CS 3000 Graphic Builder
- ■ Adding PDF Port for Self-Documentation
- ■ PC Shutdown
- ■ Automatically Synchronization with Internet Time Server

Sep. 2016/5th Edition/R6.03.10

The following item has been added:

- ■ Double-width instrument faceplates in graphic views with control attribute
- ■ Limitation on the length of the domain name and the domain controller computer name when using UGS in a Windows domain

Jun. 2016/4th Edition/R6.03

The following item has been added:

- 1.1.37 Unified Gateway Station (UGS2)

The level of the following section has been changed:

- 1.1.9 Consolidated Alarm Management Software

Dec. 2016/3rd Edition/R6.02

The following item has been added:

- ● Precautions about the Number of Combinations of a Communication I/O Module and a Connected Device

The following items have been updated:

- ● Precautions When Using the Dependency Analyzer
- ● Adding PDF Port for Self-Documentation

The following items have been deleted:

- ● Precautions about the Display of User Role Definition Dialog Box
- ● Precautions About Display in the Control Drawing Area
- ● Precautions When Using the Sorting and Filtering Functions
- ● Precautions about the Revision History of VP builders (1)
- ● Precautions about the Revision History of VP builders (2)

Apr. 2015/2nd Edition/R6.01.10

The following item has been added:

- 1.1.7 Automation Design Suite

Mar. 2015/1st Edition/R6.01

Newly published.

■ For Questions and More Information
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