

After an update from SIMATIC powerrate V4.0 to V4.0 SP1 how can utilize the advantages of the new block interface with an S7-300?

WinCC/SIMATIC powerrate V4.0 SP1

FAQ • May 2012



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Caution

The functions and solutions described in this article confine themselves predominantly to the realization of the automation task. Furthermore, please take into account that corresponding protective measures have to be taken in the context of Industrial Security when connecting your equipment to other parts of the plant, the enterprise network or the internet. Further information can be found in Entry ID: I50203404!

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Question

After an update from SIMATIC powerrate V4.0 to V4.0 SP1 how can you utilize the advantages of the new block interface with an S7-300?

Answer

Follow the instructions and notes listed in this document for a detailed answer to the above question.

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1 SIMATIC powerrate V4.0 SP1, New Data Interface

Description

Compared to SIMATIC powerrate V4.0, for operation with an S7-300 and WinCC, SIMATIC powerrate V4.0 SP1 includes an improved data interface on the block side for the archive data to be sent from the controller to WinCC.

If you want to use the improved data interface, you must make the following configuration steps in your project.

If you wish to retain the old interface, you do not have to change the configuration.

Instructions

The PDF document below lists all the configuration steps necessary to upgrade to the improved interface.

Note

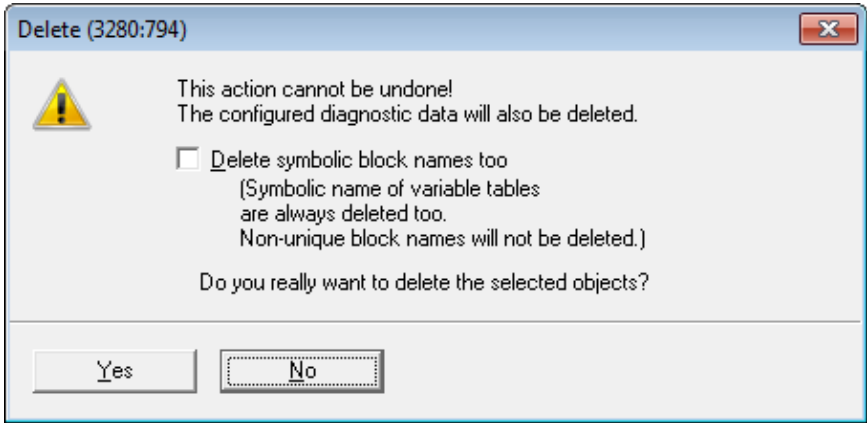
- Follow the instructions exactly to avoid errors or data loss.
- If the CPU stops, all the data is lost during the synchronization period.

Requirements

SIMATIC powerrate V4.0 SP1 is installed on your configuration computer.

2 Configuration in STEP 7

Table 2-1

No.	Step
1.	Archive your project. In the SIMATIC Manager you click "File > Archive".
2.	Make sure that the project-specific "PRE_Config.xml" file is up to date. (If you are unsure, start the Powerrate Wizard in the WinCC Explorer.)
3.	Import the blocks "PR3_AR_DATA_B" and "PR3_AR_SND_B".
4.	Delete the old blocks "PR3_AR_DATA" and "PR3_AR_SND".
5.	<p>Delete all instance data blocks of the "FB163". Leave the entry in the symbol table. Make sure that the check box is disabled as shown below.</p> 
6.	Open the symbol table and export this in the ASC format.
7.	Open the exported file with a text editor.
8.	<p>Replace each line as shown below.</p> <pre>126, DB_ARCHIVE_01 DB 400 FB 163</pre> <p>with</p> <pre>126, DB_ARCHIVE_01 DB 400 FB 173</pre> <p>Note Do not insert any empty lines or spaces and do not delete any lines or spaces. Make sure that the file can be imported after your changes.</p>
9.	<p>Import the modified file. A warning is given for each change made.</p>
10.	<p>Create a new instance data block of the type "FB173" and assign the number that matches the old FB. In this case the number "400". Click "No" in the dialog that opens.</p>
11.	Right-click the newly created instance data block. Select the "Special Object Properties > Operator Control and Monitoring".
12.	Activate "Operator Control and Monitoring" in the dialog box and confirm with "Save".
13.	Duplicate the block as often as you deleted instances in Step 5. (This sets the "Operator Control and Monitoring" option field automatically.)

No.	Step						
14.	<p>Replace all the "PR3_AR_DATA" calls with "PR3_AR_DATA_B".</p> <p>Warning Leave the parameter "AR_EVID"; otherwise the archive data is lost.</p> <p>Sample procedures In this step we present two possible procedures. You must use either one or the other.</p> <ul style="list-style-type: none"> Give "R_ID" the value given for "AR_EVID". (The "ID_1" parameter is the ID of the connection in NetPro.) In the figure below you see a call of "PR3_AR_DATA" on the left and a call of "PR3_AR_DATA_B" on the right. <table border="1" data-bbox="544 705 1281 1003"> <thead> <tr> <th>Netzwerk 2 : ARCHIVE OLD 1</th> <th>Netzwerk 2 : ARCHIVE 1</th> </tr> </thead> <tbody> <tr> <td> <pre>CALL "PR3_AR_DATA", "DB_ARCHIVE_1" FIFO := "DB_FIFO1".FIFO SERVERNAME := RUNUPCYC := 10 AR_EVID := DW#16#3 MSGEVID1 := DW#16#6000000F MSGEVID2 := DW#16#60000001 CMP_ID := SAMPLE_T := #SAMPLE_T SEND_T := REPEAT_T := SEND_RST := QPARAMF :=</pre> </td> <td> <pre>CALL "PR3_AR_DATA_B", "DB_ARCHIVE_1" FIFO := "DB_FIFO1".FIFO RUNUPCYC := AR_EVID := DW#16#3 ID_1 := W#16#1 ID_2 := R_ID := DW#16#3 MSGEVID1 := DW#16#60000001 MSGEVID2 := DW#16#6000000F MSGEVID3 := DW#16#60000010 CMP_ID := SAMPLE_T := #SAMPLE_T SEND_T :=</pre> </td> </tr> </tbody> </table> <ul style="list-style-type: none"> In large projects (multiple FIFOs or CPUs), you arrange all the "PR3_AR_DATA" in one or more FCs. Create sources from these FCs. In the text files available you can generate the calls with a just a few "Cut & Paste" and "Find & Replace" actions. Delete the "MSGEVID1" or "MSGEVID2" line. <table border="1" data-bbox="544 1153 1273 1301"> <tbody> <tr> <td style="background-color: #FFDAB9;"> <pre>CALL "PR3_AR_DATA", "DB_ARCHIVE_01" { FIFO := "DB_FIFO_01".FIFO, AR_EVID := DW#16#1, MSGEVID1 := DW#16#6000000F, MSGEVID2 := DW#16#60000001, SAMPLE_T := #SAMPLE_T;</pre> </td> <td style="background-color: #D9F7D9;"> <pre>CALL "PR3_AR_DATA_B", "DB_ARCHIVE_01" { FIFO := "DB_FIFO_01".FIFO, AR_EVID := DW#16#3D, ID_1 := W#16#1, R_ID := DW#16#3D, SAMPLE_T := #SAMPLE_T;</pre> </td> </tr> </tbody> </table> <p>Generate your new FCs from the changed sources.</p>	Netzwerk 2 : ARCHIVE OLD 1	Netzwerk 2 : ARCHIVE 1	<pre>CALL "PR3_AR_DATA", "DB_ARCHIVE_1" FIFO := "DB_FIFO1".FIFO SERVERNAME := RUNUPCYC := 10 AR_EVID := DW#16#3 MSGEVID1 := DW#16#6000000F MSGEVID2 := DW#16#60000001 CMP_ID := SAMPLE_T := #SAMPLE_T SEND_T := REPEAT_T := SEND_RST := QPARAMF :=</pre>	<pre>CALL "PR3_AR_DATA_B", "DB_ARCHIVE_1" FIFO := "DB_FIFO1".FIFO RUNUPCYC := AR_EVID := DW#16#3 ID_1 := W#16#1 ID_2 := R_ID := DW#16#3 MSGEVID1 := DW#16#60000001 MSGEVID2 := DW#16#6000000F MSGEVID3 := DW#16#60000010 CMP_ID := SAMPLE_T := #SAMPLE_T SEND_T :=</pre>	<pre>CALL "PR3_AR_DATA", "DB_ARCHIVE_01" { FIFO := "DB_FIFO_01".FIFO, AR_EVID := DW#16#1, MSGEVID1 := DW#16#6000000F, MSGEVID2 := DW#16#60000001, SAMPLE_T := #SAMPLE_T;</pre>	<pre>CALL "PR3_AR_DATA_B", "DB_ARCHIVE_01" { FIFO := "DB_FIFO_01".FIFO, AR_EVID := DW#16#3D, ID_1 := W#16#1, R_ID := DW#16#3D, SAMPLE_T := #SAMPLE_T;</pre>
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15.	Check your changes and archive your project once more. (In case of error you do not have to begin again with Step 1.)						
16.	Stop WinCC flexible Runtime.						
17.	<p>Stop the CPU.</p> <p>Warning At this point you must make sure that you stop the CPU at the right moment. This limits the data loss for that one synchronization period (FIFOs are empty). No data is captured when the CPU is stopped.</p>						
18.	<p>Load all the changes into the CPU.</p> <ul style="list-style-type: none"> New FBs New DBs Modified FCs 						
19.	Start the CPU. The new archiving system is initialized.						
20.	Right-click "OS" and compile this by selecting "Complete OS" and "With overall reset".						

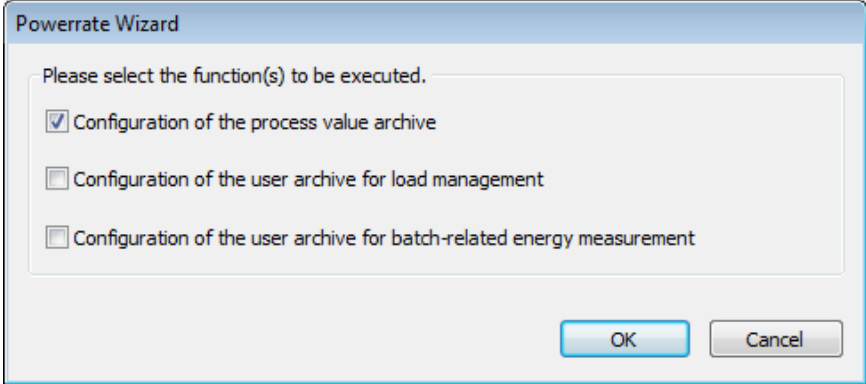
3 Configuration in WinCC

Requirements

You have executed the steps in Chapter 2 and compiled without error.

Configuration

Table 3-1

No.	Step
1.	Switch to the WinCC Explorer.
2.	Call the Powerrate Wizard. Enable only the first check box. 
3.	When the wizard runs through without error, you project has been migrated.