Tech Tips



Migrating an Application from 2500P-ECC1 to 2500P-JACP

1.1 Overview

The 2500P-ECC1 Ethernet Communications CoProcessor is designed for high-volume SCADA communications with 2500-Cxxx CPUs using CAMP Protocol. It also supports Modbus and Network Data Exchange (Peer-Peer). While the ECC1 Configuration Software is simplified for ease of use, some users have discovered the wealth of additional capabilities available when working directly with Janus Workbench on 2500P-JACP Janus Coprocessors. This Tech Tip explores the process of migrating an application from ECC1 to JACP.

1.2 Steps to Migration

- 1. Export the application from the ECC1 Configuration Program
- 2. Import the application to a new project in Janus Workbench
- 3. Rename the Project
- 4. Set the desired IP address in Project Settings
- 5. If CAMP Server was used in ECC1:
 - a. Add "505 style" tags to all the variables in Janus Workbench
 - b. Add the CAMP Server configuration in the Fieldbus Editor
 - c. Auto-generate the CAMP Server tag configuration

1.3 Step 1 – Export the Application from the ECC1 Configuration Program

• Open the ECC1 file in the ECC1 Configuration Program

Here is the project:



II 2500P-ECC1 Configuration
<u>F</u> ile <u>F</u> dit <u>V</u> iew <u>I</u> ools <u>H</u> elp
🛃 Save to File 🜾 Compile/Send to ECC1 📱 Compile/Save to SD Card 🖕 🗄 🖅 ECC1 Settings 🕅 Verify Data 🖕
Untitled1.ecc 🗶
Protocol Selection
🗊 CAMP Server
CAMP Client
Upen Modbus Server
 a per modulus client a 10 25 1 230: 502/TCP (Modbus Device #1)
 ✓ Unit ID 1 ()
FC03> Read Holding Registers : (1 - 10)
Temperatures (1 - 10)
Network Data Exchange Publish
A Network Data Exchange Subscribe
agname Database
Tagname Type Address Count High Priority Description CC MS MC NP NS TransferSe
□ Temperatures V 1 10 □ 0

- Click "compile/save to SD card" (do not have an SD card installed.)
- A window will pop up saying "no removable media found. Insert card and try again."
- Leave this window open. Do not close it or hit "ok".
- Using Windows file explorer, navigate to C:\Users\username\AppData\Local\CTI 2500P-ECC1 Configuration Program. The "username" will be your username on this PC. You may need to configure your file explorer to "Show hidden files, folders and drives" to see the "AppData" folder.
- If the "no removable media found" window was not closed, there should be a folder "PRJ*nnnnn*" which contains the Janus Workbench project. The folder should have today's date. If there are multiple "PRJ*nnnnn*" folders, be sure to get the correct one.
- Copy that PRJ folder to the place where you store Workbench programs
- Open Workbench and use "Add existing project From Disk" and select the "PRJ" folder you copied.
- Now your ECC1 project should be opened in Workbench!

1.4 Step 2 - Import the Application to a New Project in Janus Workbench (JSoft)

- In JSoft, open a workspace.
- Use File Add Existing Project From Disk to navigate to the PRJ folder you saved above.
- The project will be imported. Here it is in JSoft. Note that variable names all begin with "ecc1_" and then append the ECC1 tagname.



С	:\Users\rpeck559\OneDrive - Control Technologies, Inc\CTI Workspace\Work
E	MoDBUS Master
뷺	A & Open MODBUS: 10.25.1.230:502
TE E	✓ *■ <3> Read Holding Registers (1) [110]
	1: ecc1_Temperatures_Pt1
	2: ecc1_Temperatures_Pt2
-	3: ecc1_Temperatures_Pt3
	4: ecc1_Temperatures_Pt4
8	5: ecc1_Temperatures_Pt5
÷	6: ecc1_Temperatures_Pt6
↑ →	7: ecc1_Temperatures_Pt7
٩	8: ecc1_Temperatures_Pt8
	9: ecc1_Temperatures_Pt9
	10: ecc1_Temperatures_Pt10
	™e MODBUS Slave

1.5 Step 3 - Rename the Project (if needed)

In JSoft, highlight the project name, right click, and select Project Description. In the dialog box, enter the desired name for the project. Click OK.

Rename 'C:\U	ers\rpeck559\OneDr	ive - Control Tec	hn >
Project name ECC1_Migration			
Project Descriptic	ר ז		
Comment:			
Description:			
4			Þ
	<u>o</u> k	Cancel	<u>H</u> elp

The project will be renamed:

ECC1_Migration

- Exception programs
- Watch (for debugging)
 - 🛯 Soft Scope
 - 🖻 Main
 - 🎟 Initial values
 - 18 Binding Configuration
 - §9 Global defines
 - ଜ Variables
- E Types



1.6 Step 4 - Set the Desired IP address in Project Settings

In JSoft, highlight the project name, right-click, and select Communication Settings. In the dialog box, enter the desired IP address for the target Janus product. Be sure to include the ":1100" after the IP address as shown below.

Communication Settings	×
T5 protocol ~	OK
10.25.1.206:1100	Browse
10.25.1.206:1100 10.25.1.208:1100 10.25.1.209:1100	Help
Timeout (seconds): 3	

1.7 Step 5 - If CAMP Server was used in ECC1:

If the ECC1 was being used as a CAMP Server, this will need to be configured in JSoft. This is done by "tagging" the variables in the JSoft application with the "505 style" names. **IMPORTANT NOTE: Only** variables which are tagged by name in the ECC1 application are migrated to Workbench. If the ECC1 was being used as a "general purpose" SCADA interface, it is likely that not all variables which were being polled from the ECC1 are included in the tag database. These other variables must be added to the JSoft application manually.

1.7.1 Add "505 style" tags to all the variables in Janus Workbench

For any variables that were imported into JSoft, enter the 505 memory reference in the "Tag" column. In the example below, we have entered V1 - V10 for these variables, since that was their reference from the ECC1 application.

Name	Туре	Dim.	Attrib.	Syb.	Init value	User	Tag	Des
🗅 Main								
🔺 🎧 Global variables								
ecc1_Temperatures_Pt1	UINT						V1	
ecc1_Temperatures_Pt2	UINT						V2	
ecc1_Temperatures_Pt3	UINT						V3	
ecc1_Temperatures_Pt4	UINT						V4	
ecc1_Temperatures_Pt5	UINT						V5	
ecc1_Temperatures_Pt6	UINT						V6	
ecc1_Temperatures_Pt7	UINT						V7	
ecc1_Temperatures_Pt8	UINT						V8	
ecc1_Temperatures_Pt9	UINT						V9	
ecc1_Temperatures_Pt10	UINT						V10	
RETAIN variables								



1.7.2 Add the CAMP Server configuration in the Fieldbus Editor

Start the Fieldbus Editor and click the "Insert Configuration" icon at the left. Select CAMP Server and select OK.

Select a configuration CTI 2500P-ACP1 Driver information CAMP Server CAMP Server CTI Janus Controllers CAMP Server CTI Data Cache Client CAMP Server CTI Profibus DP Master CTI Profinet Controller CTI Profinet Controller Chemet/IP Flex/O Ethermet/IP Tag Client Ethermet/IP Tag Server Link with embedded HTTP server MQTT Client OPC UA Server OPC UA Server			
CAMP Server CTI 2500P-ACP1 CTI Janus Application Coprocessor CTI Janus Controllers CAMP Server CTI Enhanced Data Cache Client CTI PLC Local I/O CTI Profibus DP Master CTI Profinet Controller Chemet/IP Tag Client Ethermet/IP Tag Server Link with embedded HTTP server MQTT Client OPC UA Server	elect a configuration	Driver information	
CAMP Server	CTI 2500P-ACP1 CTI Janus Application Coprocessor CTI Janus Controllers CAMP Client CAMP Server CTI Enhanced Data Cache Client CTI PLC Local I/O CTI PLC Remote I/O CTI Profibus DP Master CTI Profinet Device Ethernet/IP Adapter (server) Ethernet/IP FlexIO Ethernet/IP FlexIO Ethernet/IP Tag Client Ethernet/IP Tag Server Link with embedded HTTP server MQTT Client OPC UA Server Driver name	CAMP Server	•
· · · · · · · · · · · · · · · · · · ·	CAMP Server		_
			v

The CAMP Server will be added.



1.7.3 Auto-generate the CAMP Server tag configuration

Now, right-click on the CAMP Server item and select Auto-generate Configuration. In the dialog box, tick the boxes according to how you want the auto-generator to detect 505 memory references.



Now the CAMP Server is configured.

E	4	평 CAMP Server
뮮		∡ ≑ Served I/Os
"B		Interpretation (V) [INT] (1)
-		ecc1_Temperatures_Pt1
+		ecc1_Temperatures_Pt2
		ecc1_Temperatures_Pt3
200		ecc1_Temperatures_Pt4
₿↑		ecc1_Temperatures_Pt5
+		ecc1_Temperatures_Pt6
↑		ecc1_Temperatures_Pt7
٩		ecc1_Temperatures_Pt8
		ecc1_Temperatures_Pt9
		ecc1_Temperatures_Pt10
	4	Ma MODBUS Master
		▲
		✓ "■ <3> Read Holding Registers (1) [110]
		1: ecc1_Temperatures_Pt1
		2: ecc1_Temperatures_Pt2
		3: ecc1_Temperatures_Pt3
		4: ecc1_Temperatures_Pt4
		5: ecc1_Temperatures_Pt5
		6: ecc1_Temperatures_Pt6
		7: ecc1_Temperatures_Pt7
		8: ecc1_Temperatures_Pt8
		9: ecc1_Temperatures_Pt9
		10: ecc1_Temperatures_Pt10
		Me MODBUS Slav

