APPLICATION NOTE

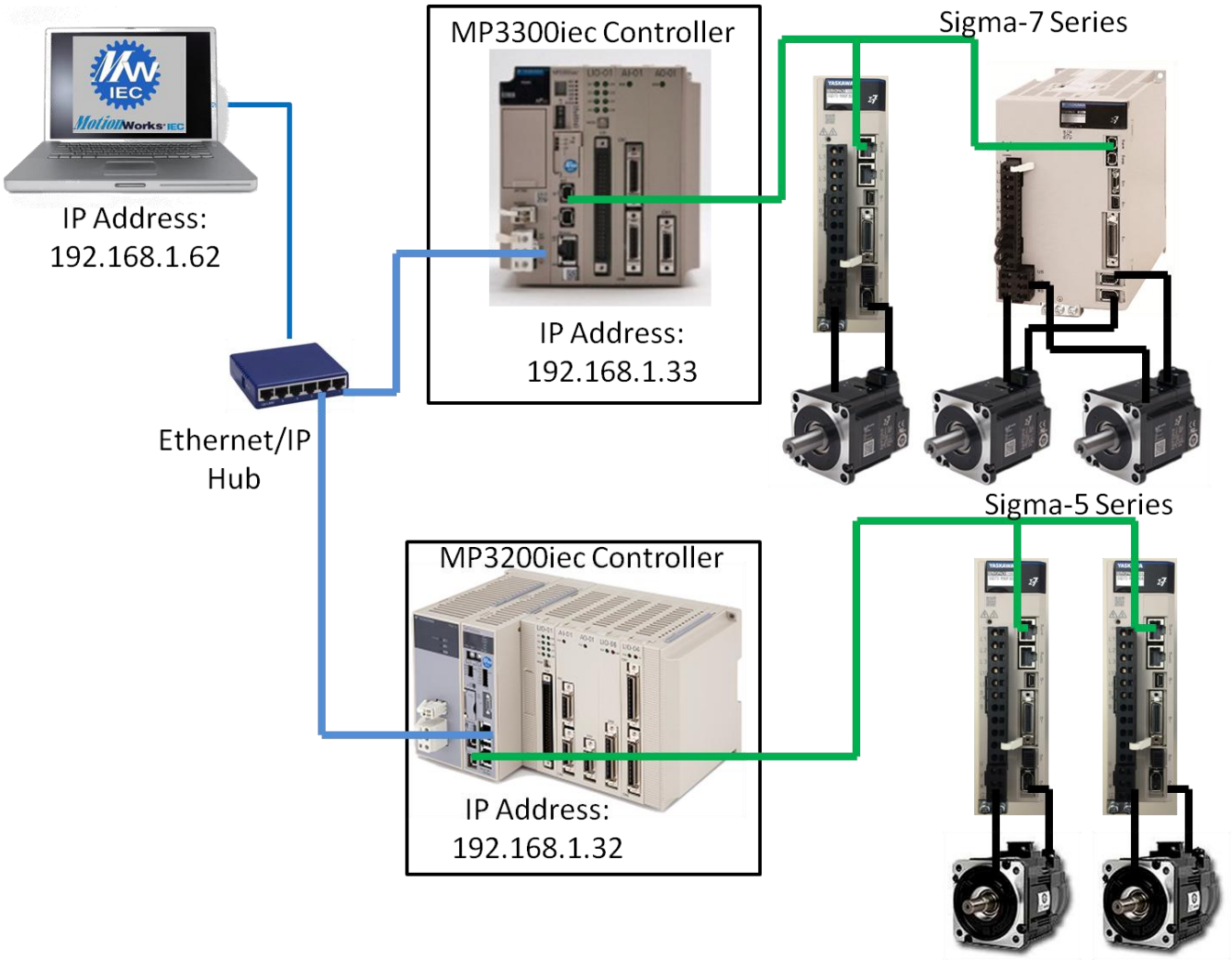
YASKAWA

Title: How to Configure a Project to Include Multiple MPiec Controller Resources

Product(s): MP2000iec, MP3000iec Series Controllers, Sigma-7Siec Controllers, Sigma-7 Series, Sigma-5 Series	**Doc. No.** AN.MPIEC.19

Application Overview

This application note will go in detail about how to download to multiple resources within MotionWorks IEC 3 Pro.



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Products Used

Component	Product and Model Number
Servopack	Sigma-7 Series Mechatrolink-III, Sigma-5 Series Mechatrolink-III
Motor	Sigma-7 Series Servomotors, Sigma-5 Series Servomotors
Controller	MP2000iec and MP3000iec Series and Sigma-7Siec Controllers
Software	MotionWorks IEC 3.2 Pro or greater

Application Requirements

MPiec Series Firmware 3.2 or greater

MECHATROLINK-III Sigma-7 or Sigma-5 Series SERVOPACKS

Application Solution and Benefits

With today's machines having a plethora of axes for motion, Yaskawa's ability to have multiple resources allows for modularity between different machine sections.

Download the latest below:

- MotionWorks IEC (must have partner login)
- MotionWorks IEC Firmware (must have partner login)

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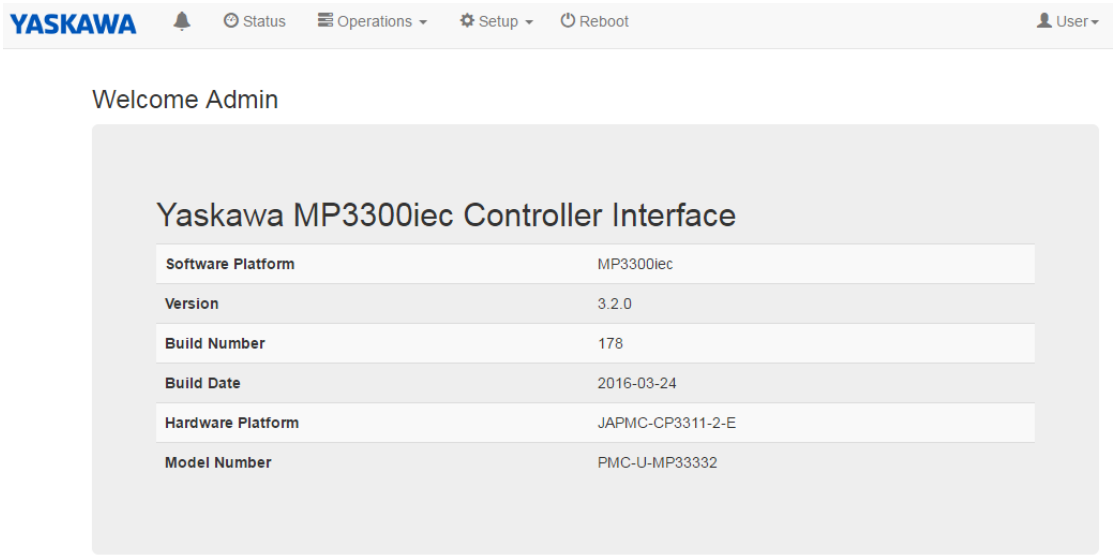
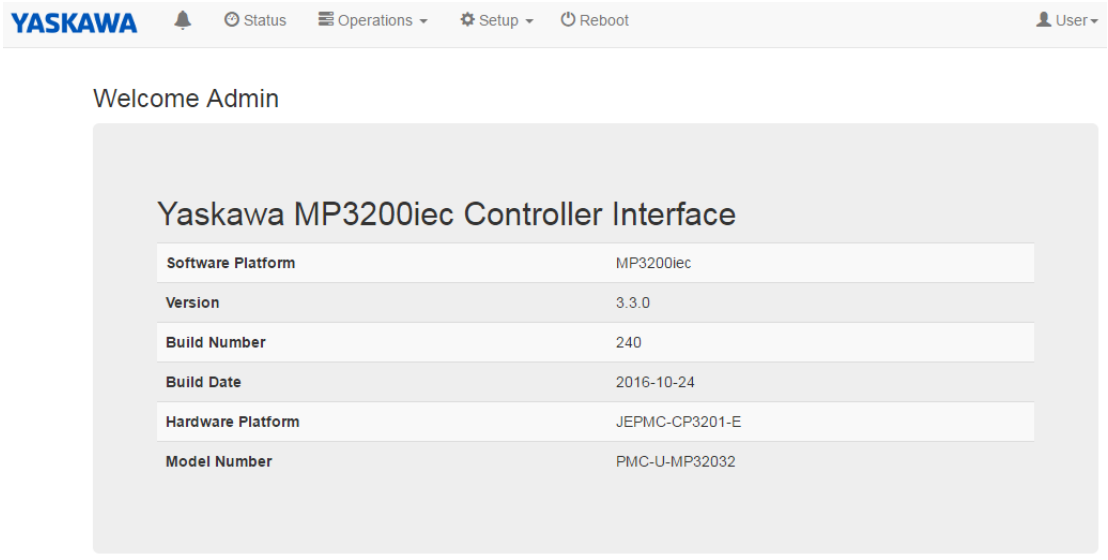
Implementation

Steps:

1. Establish IP Address on both MP3000iec Series Controllers
   a. MP3300iec Controller IP Address: 192.168.1.33



   b.
   c. MP3200iec Controller IP Address: 192.168.1.32



   d.

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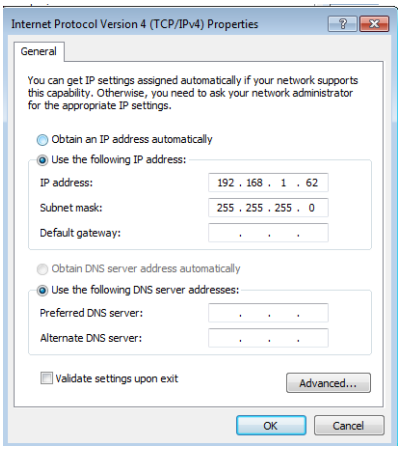
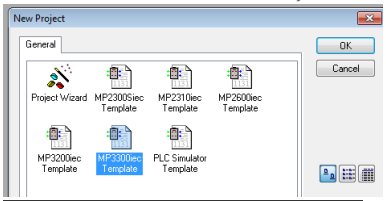
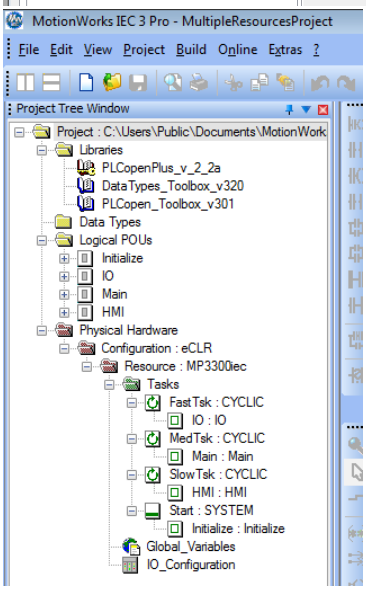
2. Establish IP Address on PC: 192.168.1.62

a. 

3. Open MotionWorks IEC 3 Pro
4. Begin and save and compile a new project with MP3300iec or MP3200iec (whichever will be the default)

a. 

b. 

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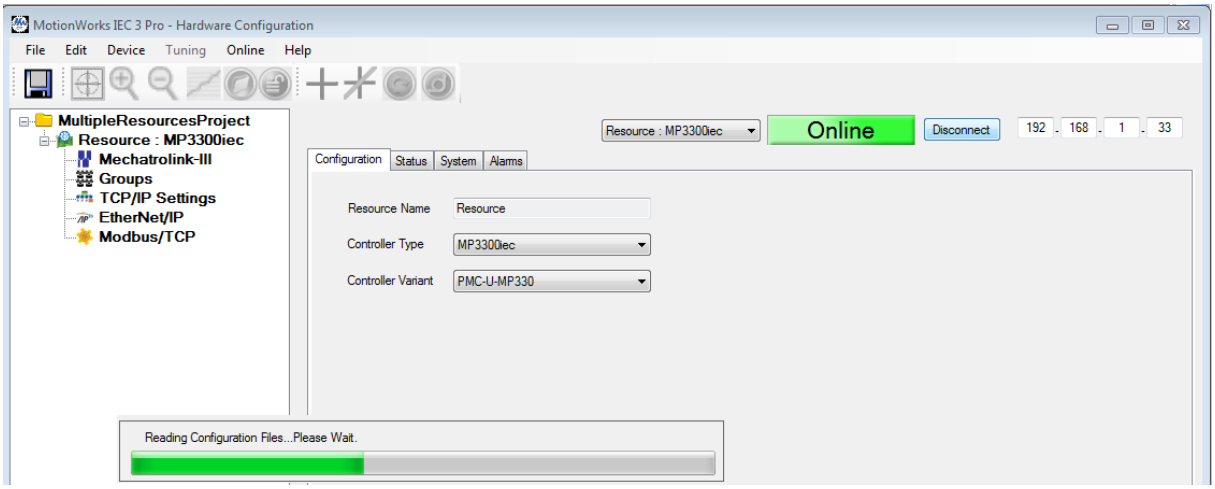
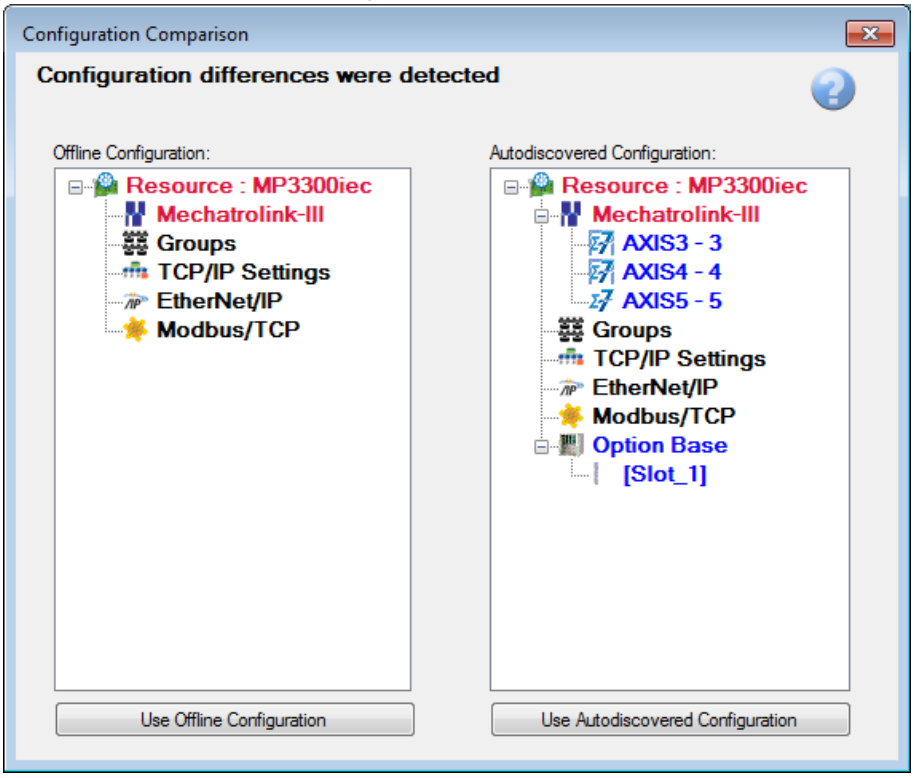
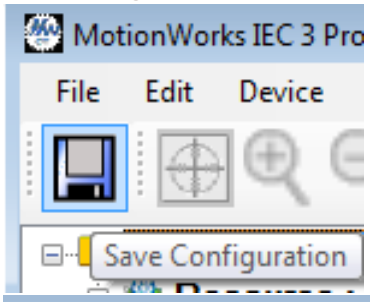
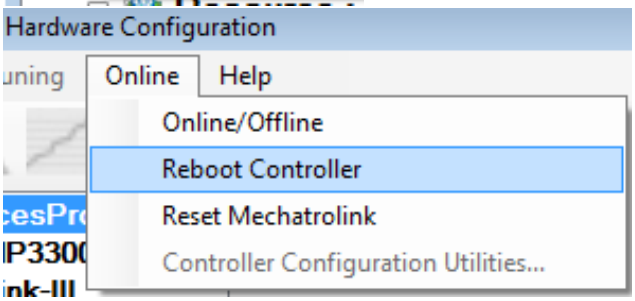
5. Launch Hardware Configuration
6. Connect to main MP3000iec Controller

a. 

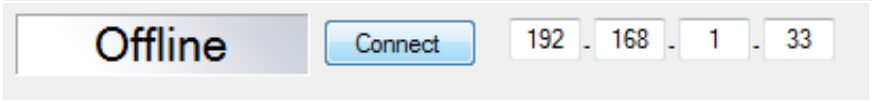
7. Upload the Auto-discovered Configuration

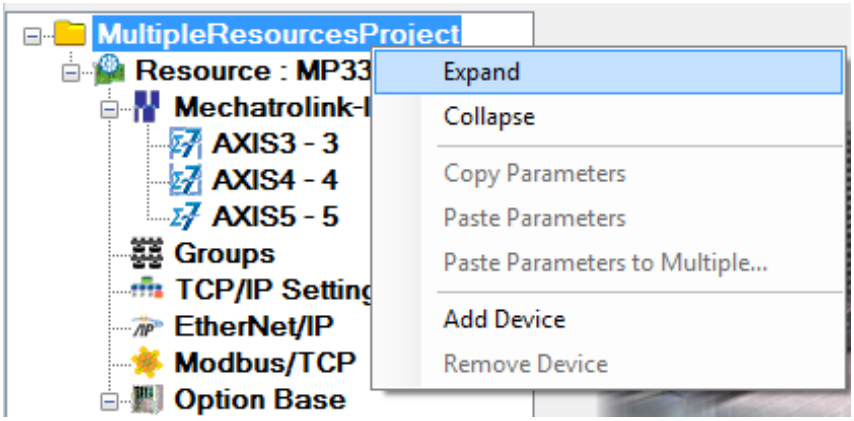
a. 

8. Click Save Configuration and reboot controller
   a. 

   b. 

9. Disconnect from MP3300iec Controller to go 'offline'
   a. 

   b. 

10. Right click on Project name folder within the Hardware Configuration and click 'Add Device'
    a. 

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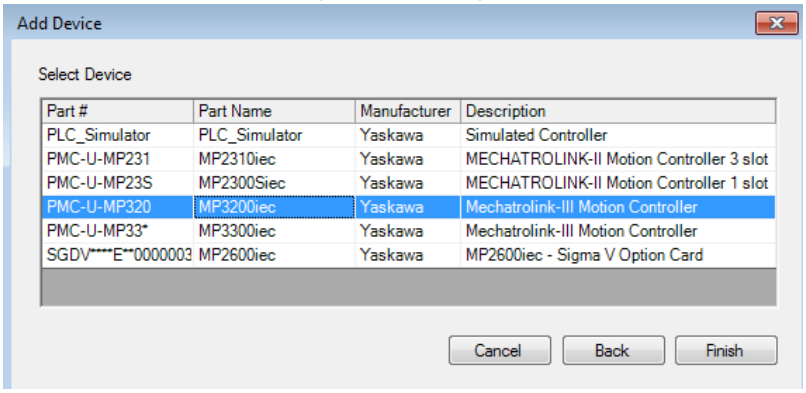
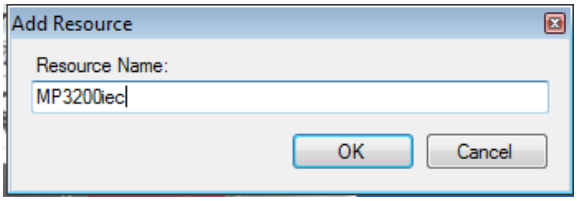
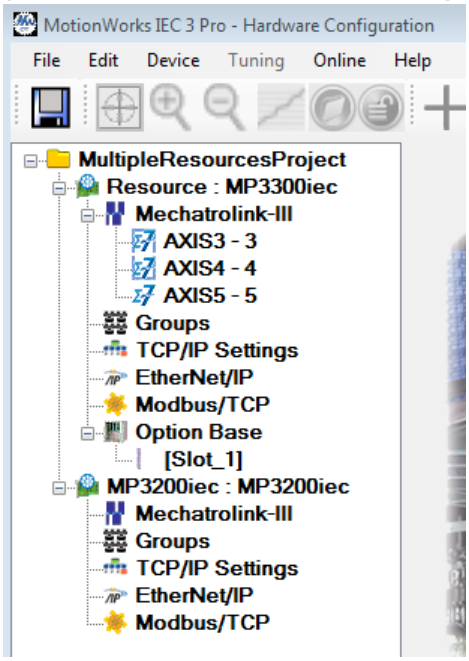
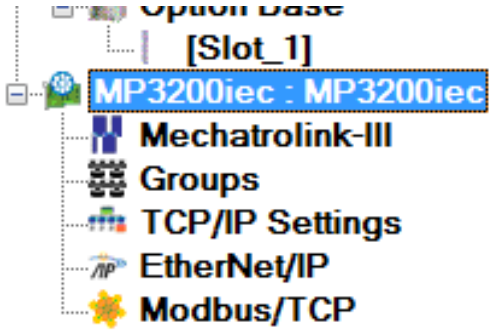
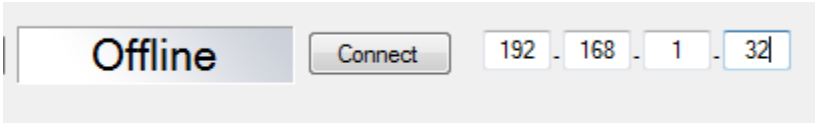
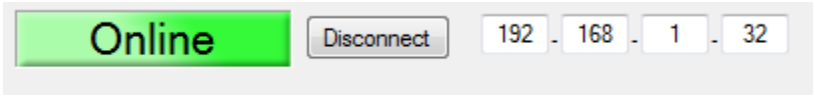
11. Choose the controller needed (MP3200iec) and click 'Finish'
    a. 

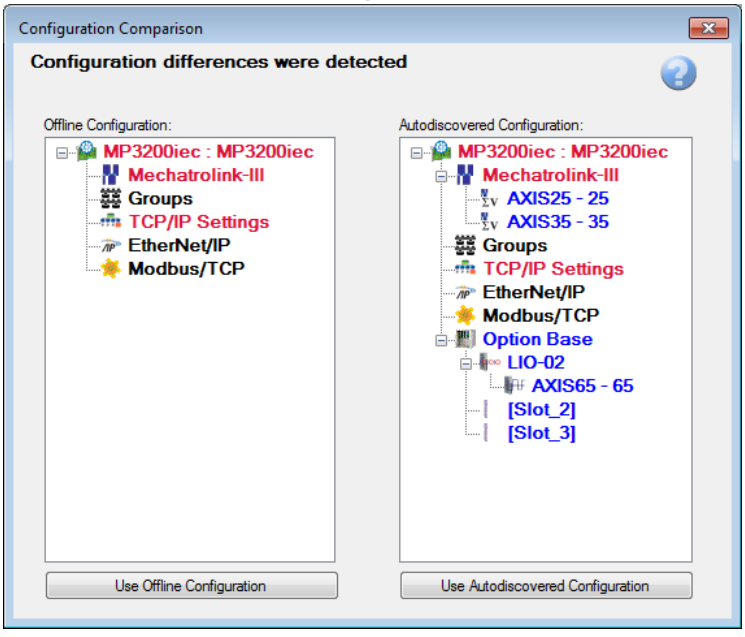
12. Create a name for the Resource and click 'OK'
    a. 

13. The project tree now shows the following
    a. 

14. Click on the MP3200iec : MP3200iec header
    a. 

15. Type in the IP Address of the MP3200iec Controller
    a. 

16. Click Connect
    a. 

17. Choose the Autodiscovered Configuration of this MP3200iec Controller
    a. 

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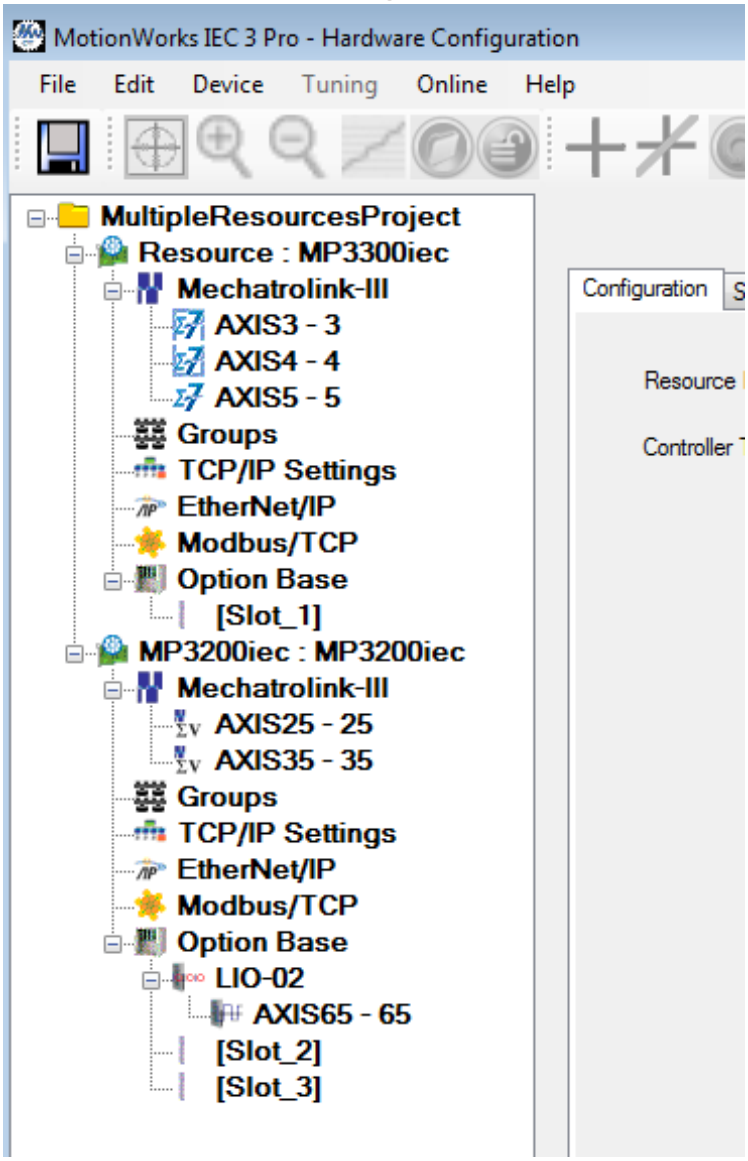
18. Project tree now shows the following:
    a. 

19. Click ‘Save Configuration’ and reboot the controller as in Step 8
20. Close Hardware Configuration

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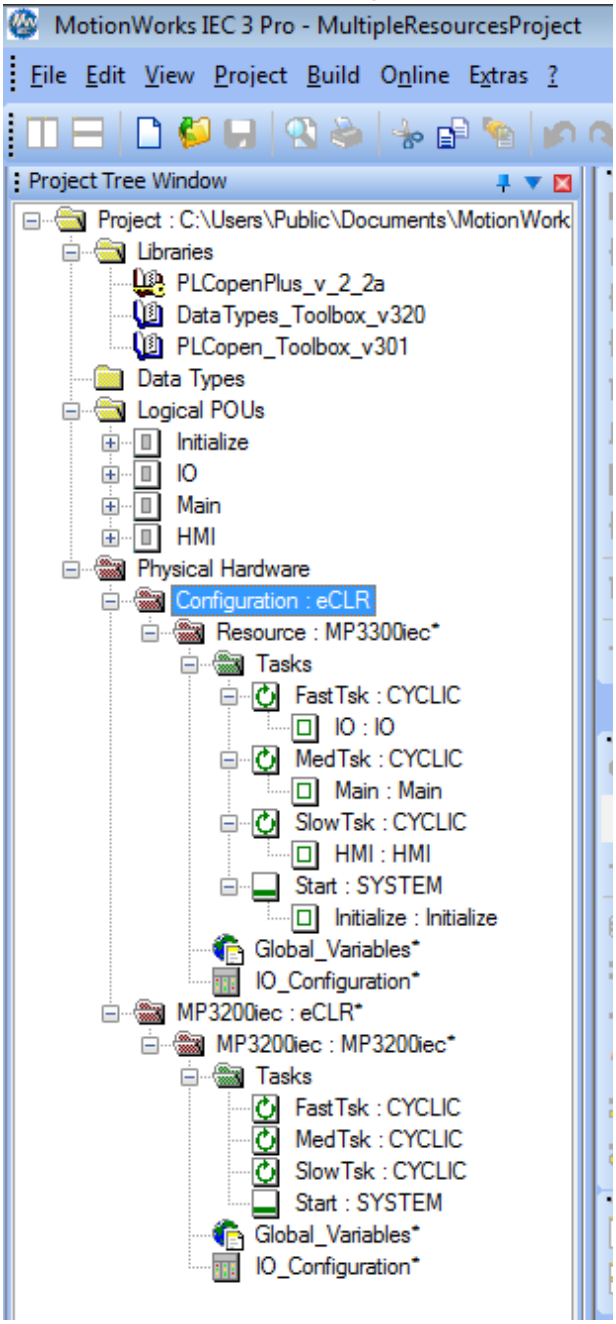
21. In MotionWorks IEC 3 Pro, the Project Tree Window should display like below:

a.



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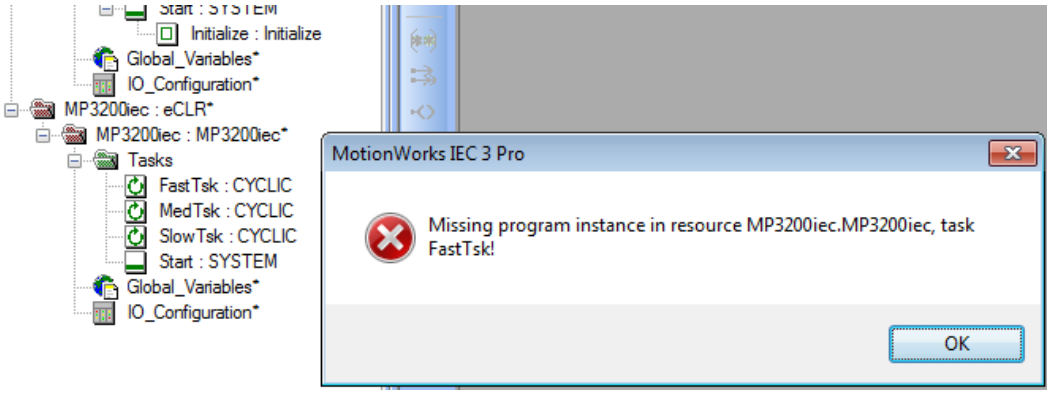
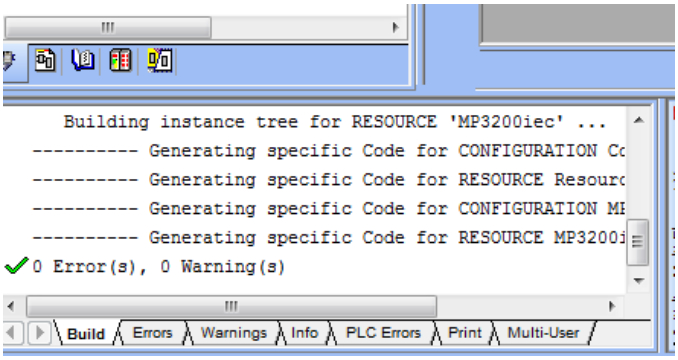
22. Compiling this project will result in errors because there aren't any Program Instances within the MP3200iec Resource Tasks

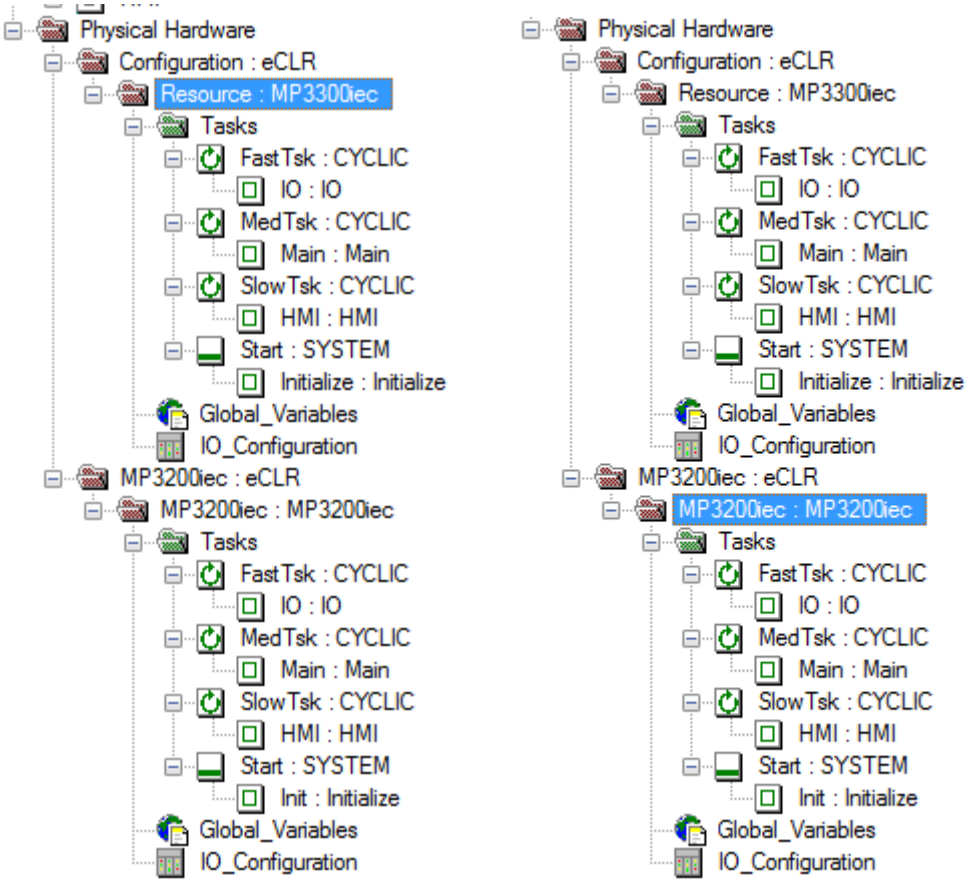
a. 

23. Add the same tasks from the MP3300iec Resource and compile and the Message Window should result in 0 Errors

a. 

24. To choose between different resources when downloading, click either ‘Resource: MP3300iec’ or ‘MP3200iec:eCLR’

a.



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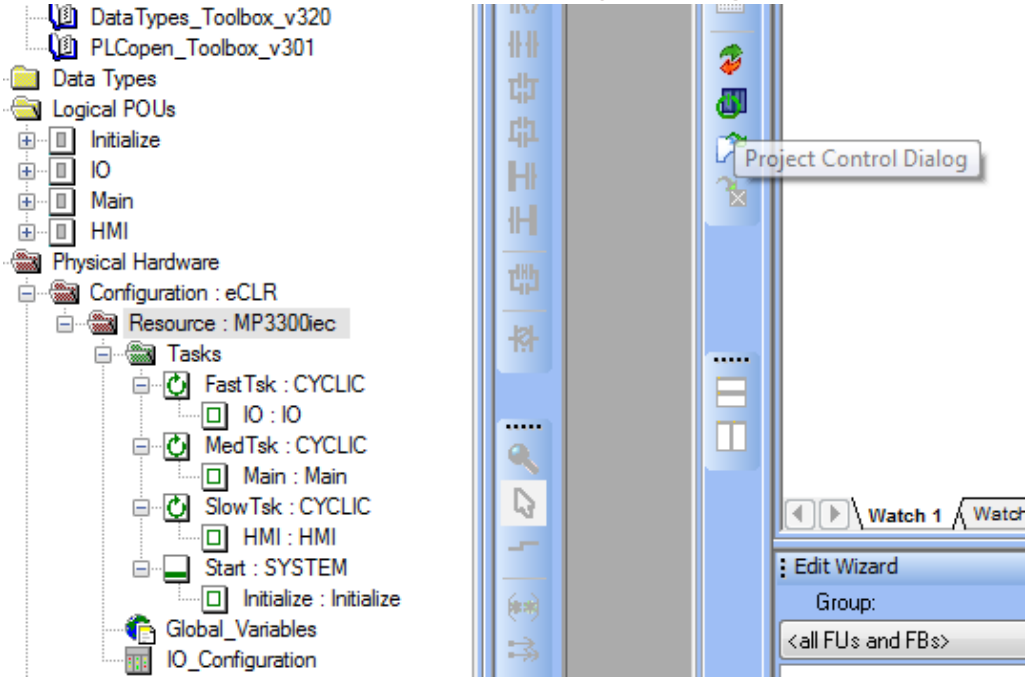
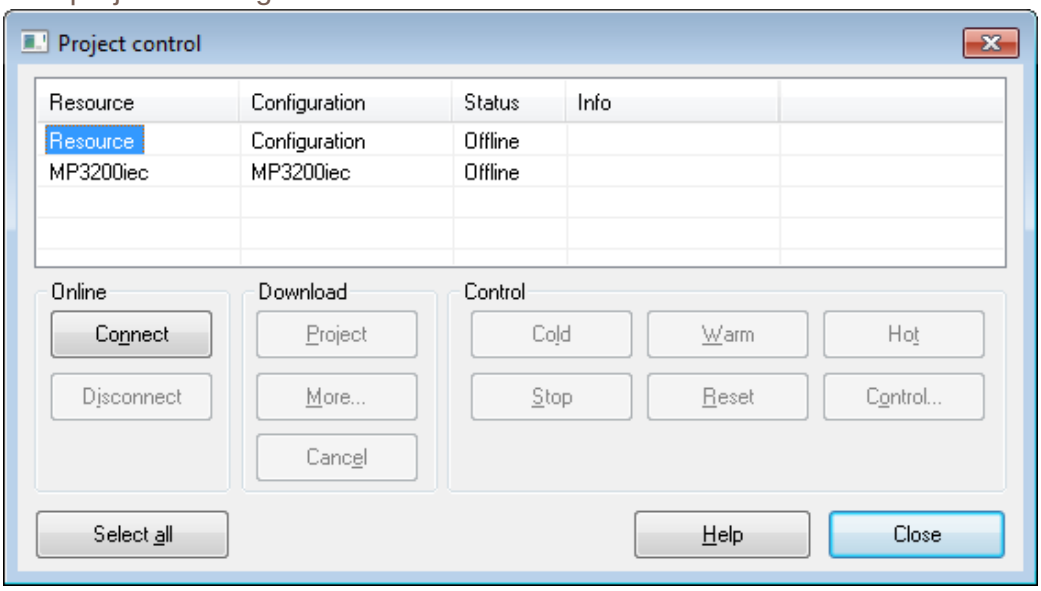
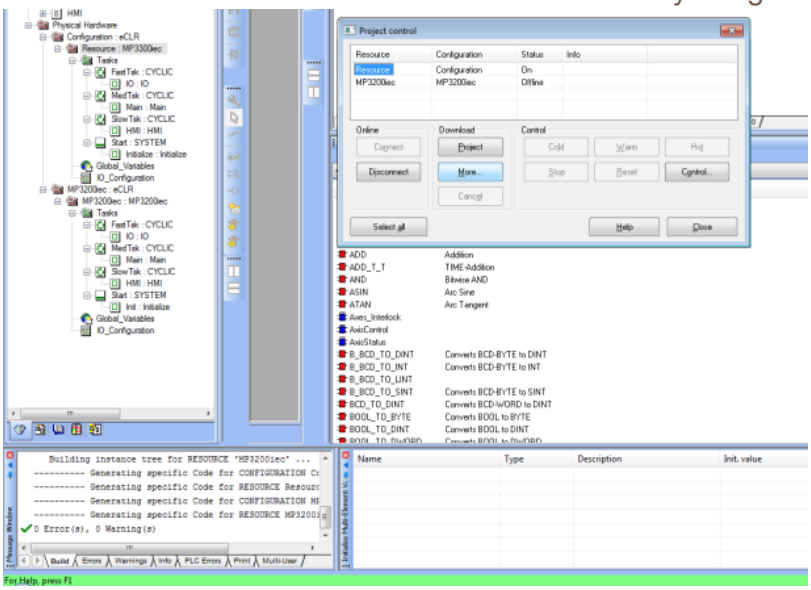
25. Click on the MP3300iec Controller and click the Project Dialog Icon

a. 

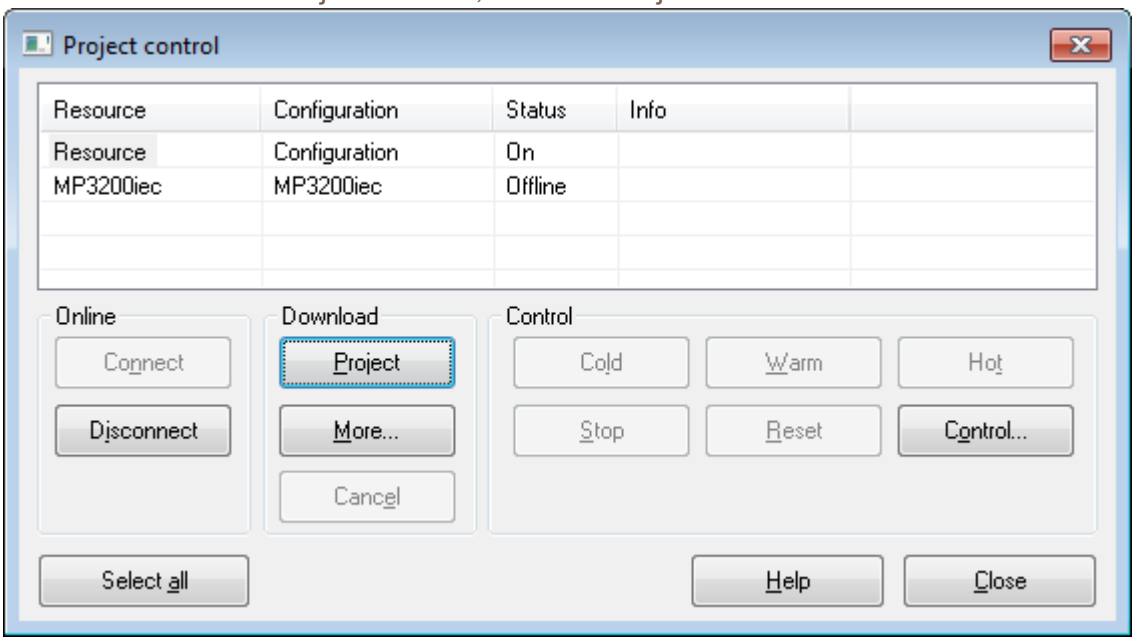
26. In the Project Control Box, notice the Status of each controller shows 'Offline'. This is due to no project running on either controller.

a. 

27. Select Resource and 'Connect'
28. The bottom of MotionWorks IEC 3 will indicate it is 'On' by the green filled bar

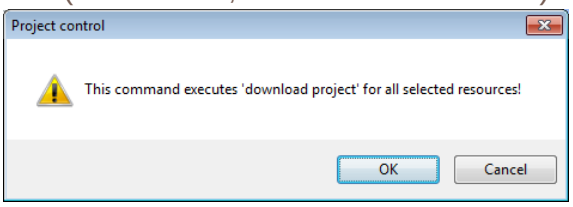
a. 

29. In the Download section of Project Control, click on 'Project'

a. 

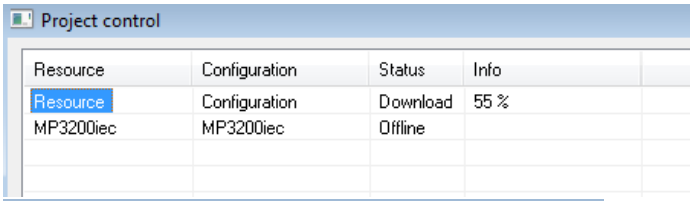
30. A warning will indicate that this command will download projects to all selected resources. (In this case, one controller for now)

a.

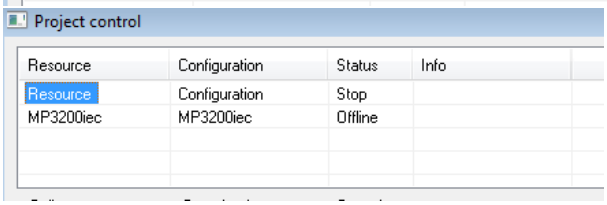


31. Click 'Ok' and watch the Status start to increment until 100% is reached and Status is 'Stop'

a.

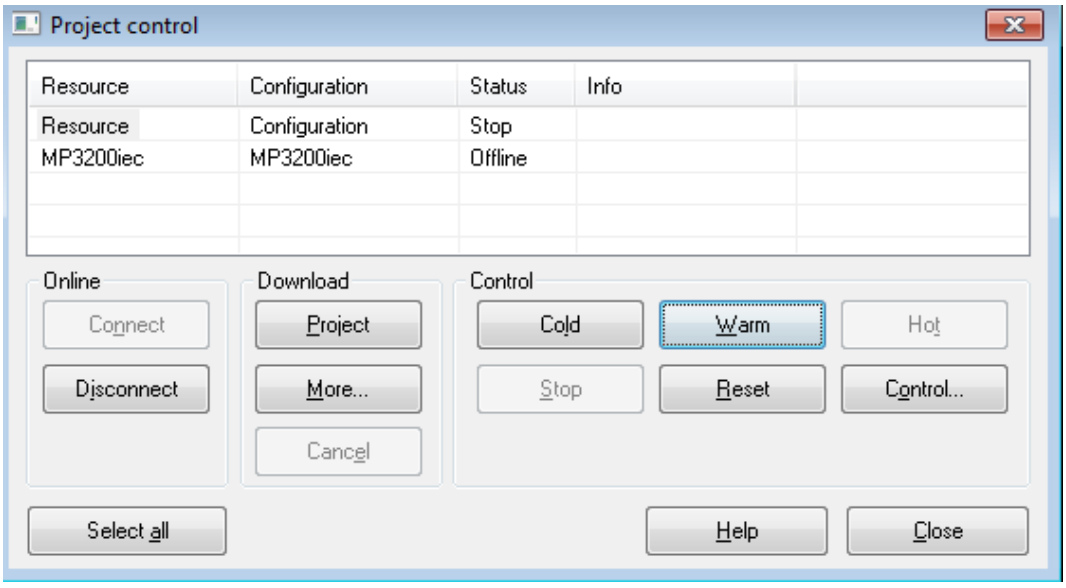


b.



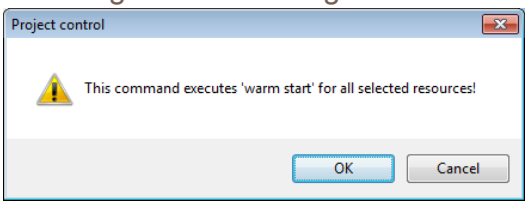
32. In the Control Section, click 'Warm'

a.



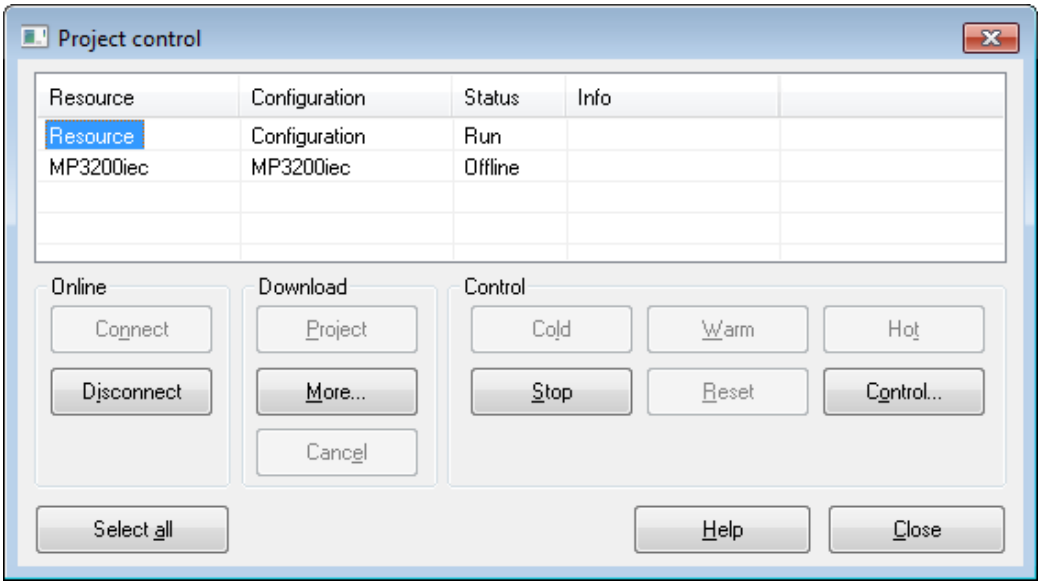
33. Another warning about selecting ‘warm start’

a.



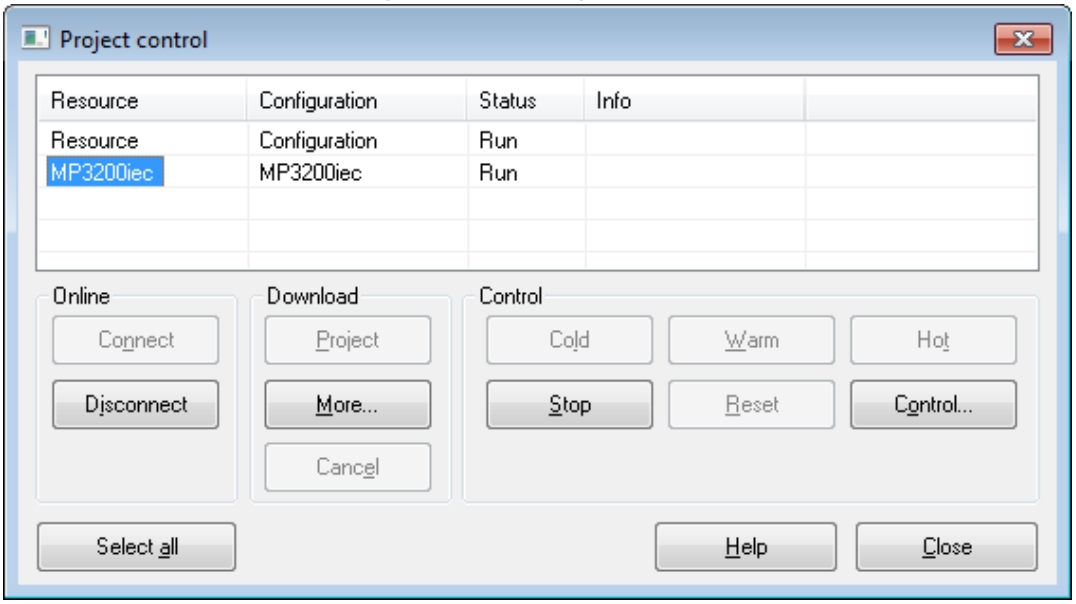
34. The Status will now read ‘Run’

a.



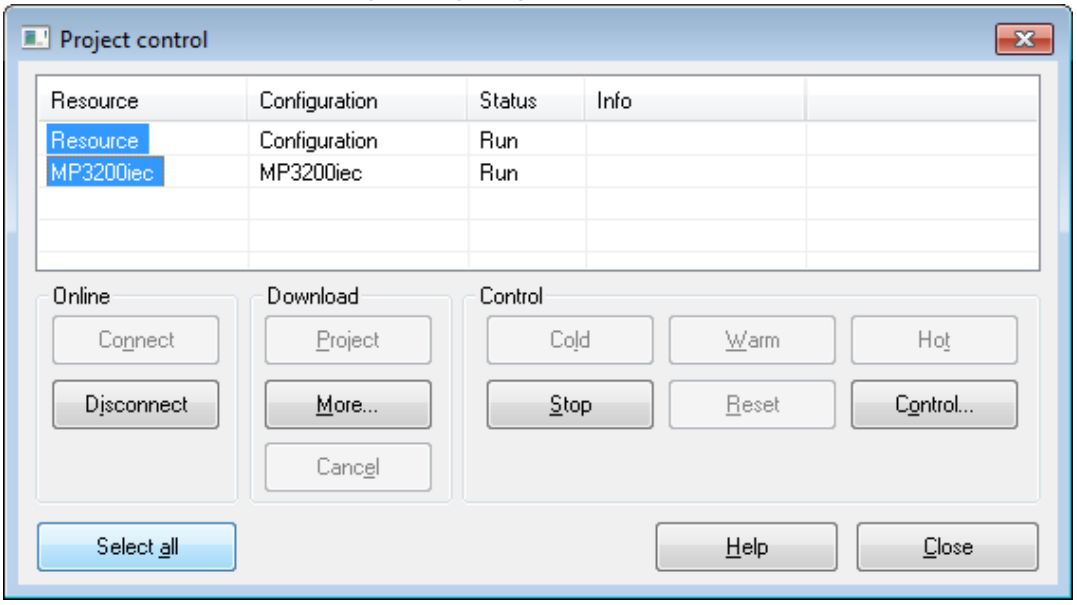
35. Repeat steps 25 through 34 to download the project to the MP3200iec Controller. The result should show the following once all complete:

a.



36. Alternatively, the user could click on the 'Select All' button to download to all Resources / Controllers at once repeating steps 25-34:

a.



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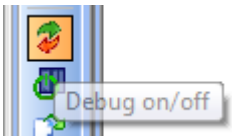
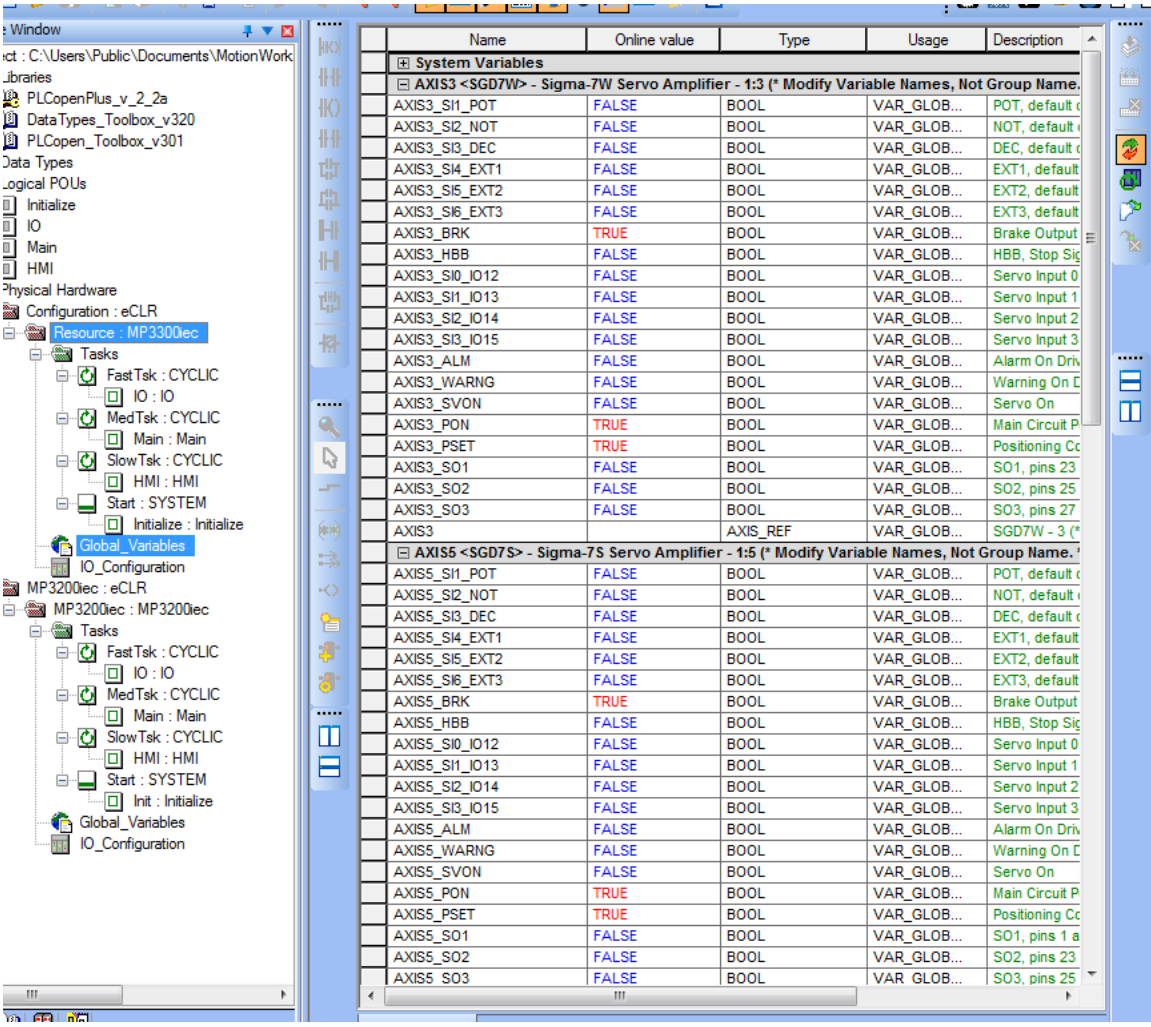
37. Close the Project Control Window
38. In MotionWorks IEC 3, click on the 'Debug' icon to see the values online
    a. 

39. Open the Global Variables worksheet based upon whichever resource is selecte to see the 'Online values'
    a. MP3300iec
    i. 

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b. MP3200iec

i.