M580 Hot Standby (HSBY)

Introduction

Just as Premium PLCs, M580s come with a Hot Standby offer to ensure high reliability of systems.

This chapter covers the basic configuration of M580 architectures. For more information, follow the M580 HSBY configuration course.

Topic Objectives

By the end of this section the student will be able to:

- Configure a basic Hot Standby M580 architecture
- Test this architecture

Exercise - Create a New HSBY Project

Learning Outcomes

By the completion of this exercise the student will:

- be able to create a new M580 HSBY ePAC project using Unity Pro
- configure the embedded Ethernet ports of the CPU
- setup parameters for Hot Standby operation
- test a M580 HSBY architecture

Equipment Required

To complete this exercise in simulation mode the following software is required:

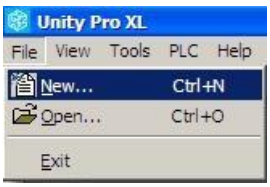
- Unity v11 or later

To complete this exercise on a PLC the following equipment is required:

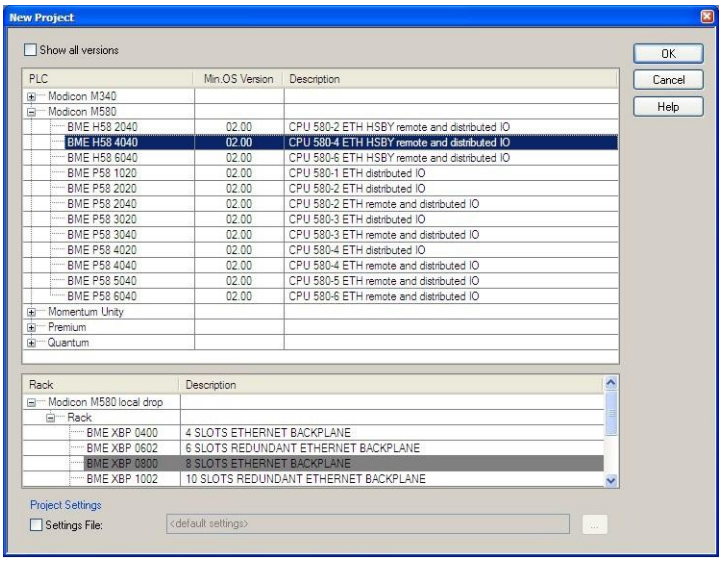
- 2 M580 HSBY
- 2 compatible power supply
- 2 Racks
- 1 Ethernet cable

Create a new project

i. Create a **New Project** by clicking **File » New** from the Unity Pro menu, or clicking the **New Project** button on the toolbar:

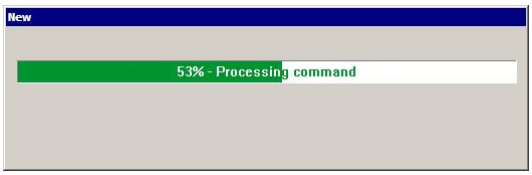


ii. Select the appropriate **M580 HSBY Processor** and **Rack** according to the simulator being used:

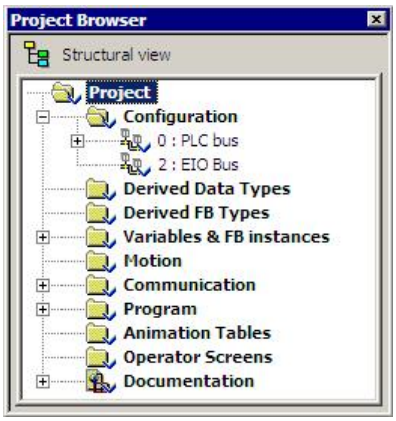


Exercise - Create a New HSBY Project (cont.)

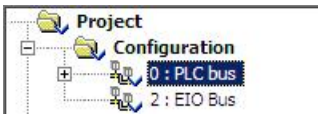
iii. Unity Pro will create the new project and populate it with default items:



iv. The **Project Browser** will display to show the project contents:



v. Double click the **0: PLC Bus** item from the **Project Browser**:

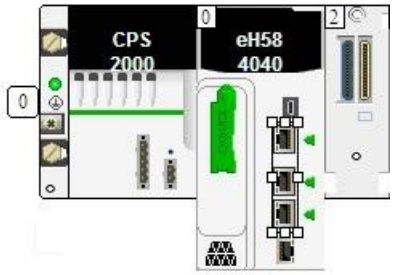


vi. The **Local Rack** will be displayed, pre-populated with the **CPU** and the **Power Supply**:

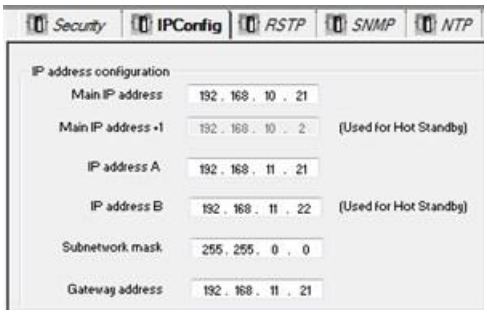
Exercise - Create a New HSBY Project (cont.)

Configure the IP address.

i. Double click the embedded Ethernet modules of the CPU:



ii. Go to the **IP Config** Tab, enter the following **Main IP Address**: 192.168.10.21.



iii. Set **IP Address A** to: **192.168.11.21**, this is the **Primary** IP address of the Remote I/O (RIO) Scanner for I/O exchanges with modules or devices in the device network drops.

iv. Set **IP Address B** to: **192.168.11.22**, this is the **Standby** IP address of the Remote I/O (RIO) Scanner in a Hot Standby architecture.

v. Set the Subnet Mask to: **255.255.0.0** and change the **Default Gateway** to **192.168.11.21**.

vi. Go to the **Security** Tab, click **Unlock Security** button. This will disable all Cyber Security features during the development state.

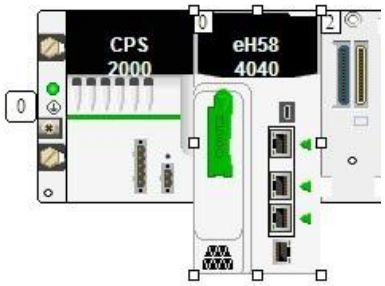
Remember to click **Enforce Security** button when the actual project is ready to deploy for operation.

vii. **Validate**  the changes.

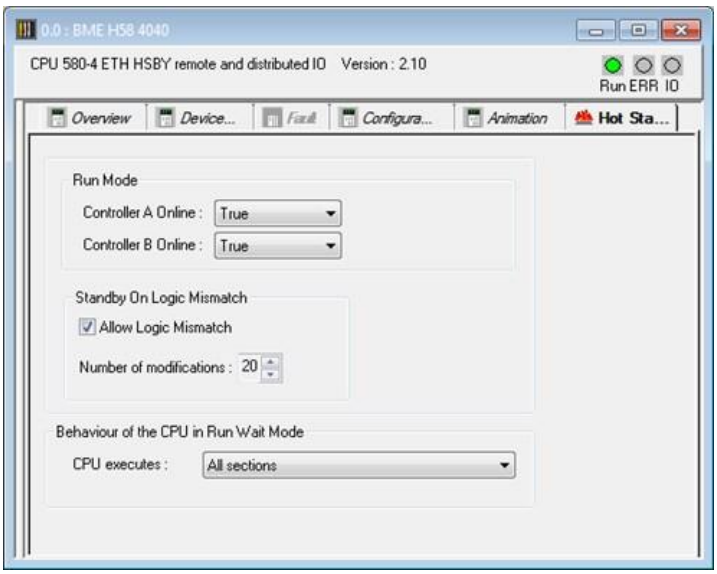
Exercise - Create a New HSBY Project (cont.)

Setup parameters for the Hot Standby operation

i. Double click on the CPU module:



ii. Configure the parameters for **Hot Standby** Tab as shown:



Checked option for "**Allow Logic Mismatch**"

iii. Select CPU executes to "**All sections**" for the behaviour of the CPU in **WAIT** (Run Offline) mode.

iv. **Validate** the changes.

v. **Build** the application.

vi. Rectify any error(s).

vii. **Save** the application as **M580_HSBY.stu**.