

FA275861:Unity Pro V7.0 application version, 140CPU6xxx Quantum CPU Firmware SV3.10 to 3.30: Using Forced bits after a warm start of PLC could result in ECOX error.

Introduction

The aim of this document is to provide technical support help to people who have a managed exception error ECOX using forced bits.

Impacted Products

Quantum 140CPU6xxxx CPUs with a **firmware SV 3.10 to 3.30**
Unity Pro V7.0 S, M, L ,XL and XLS used to build the **application**.

Summary of the issue

Following these steps in this order might lead the controller into a managed Exception Code stop state (ECOX):

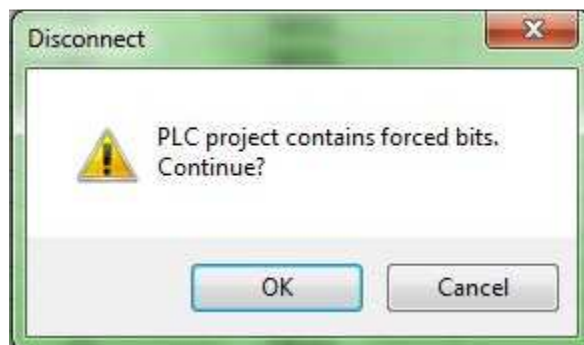
- Activate any Forced Bits
- Do a warm start
- Change value of any of the Forced Bits

Use case example to reproduce the issue:

- 1> Connect to PLC, on line mode (whatever Unity Pro version used),
- 2> Download one application initially built using Unity Pro v7.0,
- 3> PLC in Stop or in Run, create an animation table and force some bits,
- 4> Display Table[Forced Bits] *, by clicking on red F symbol and check that every forced bits are displayed,



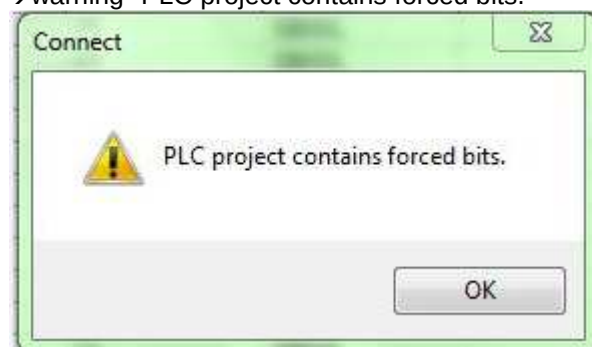
- 5> Disconnect Unity to local mode
→warning "PLC project contains forced bits. Continue?"



6> Continue and do a warm start of the Plc by power cycle .

7> Reconnect PLC,

→warning "PLC project contains forced bits."



8> Table[Forced Bits] * is empty ! VS the point 4

9> unforce bit X

10> force bit X

11> unforce bit X

Pb could occur after handling of several forced bits.

12> after few seconds, the PLC goes in STOP with the following Exception Code: ERROR EC02

Occurences Matrix

The issue described above occurs with Unity V7.0 application version and with CPU firmware between 3.1x and 3.3x.

Workarounds

- Update Unity Pro Versions and firmware OS
 - o List of minimum version :
 - OS SV3.10
 - UPro V8.1
- Use animation tables to manage Forced Bits (instead of the Forced Bits link)
- Make sure the project does not contain forced bits before a power cycle

Fixes

This problem will be fixed in the next firmware released SV 3.40 with the upgrading to V3.4 the versions of Unity Pro used to build the application will have **no impact** on this issue.

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