Advantech SE Technical Share Document

Date	2018 / 01 / 02	**Related Product**	APAX/CODESYS
Category	■ FAQ □ SOP □ Driver Tech Note		
Abstract	How to void PLC overloading on CODESYS?		
Keyword	Watchdog, Task, PLC Load		
Related OS	N/A		

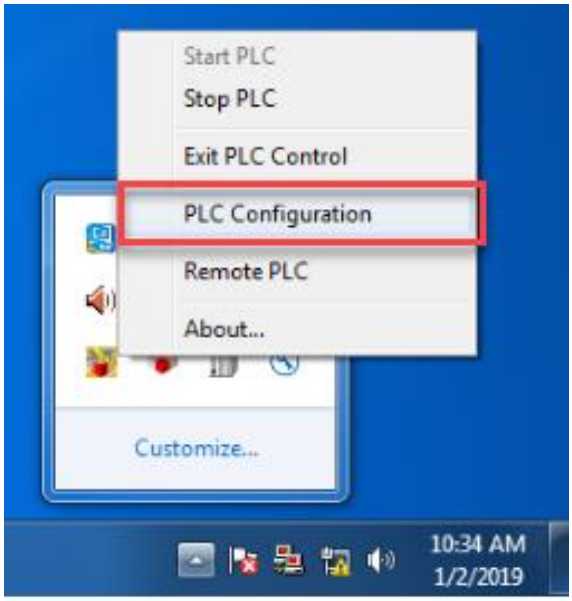
Revision History				
Date	Version	Author	Reviewer	Description
2018/01/02	V1.0	Owen.Chang	Nick.Liu	

■ Problem Description & Architecture:

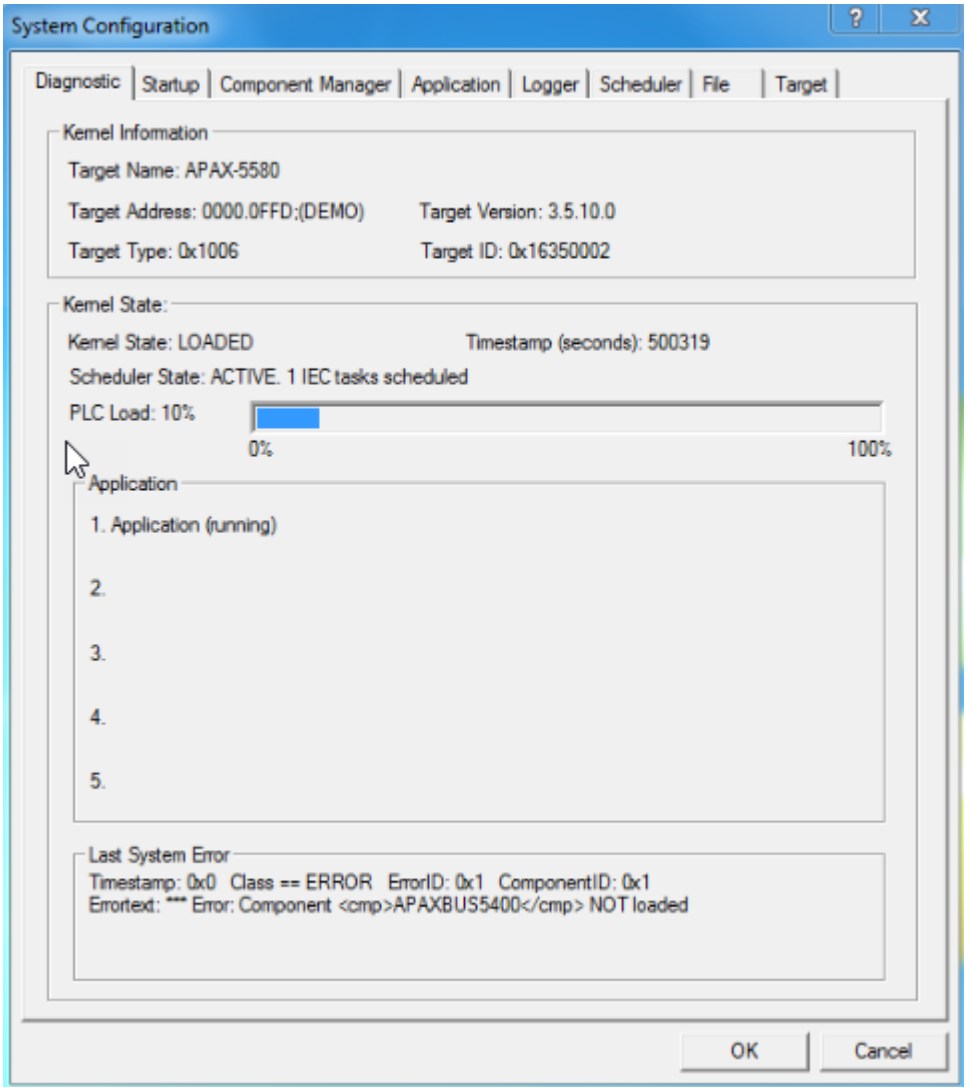
Watchdog is an important mechanism to void PLC overloading because of a rapidly increasing task cycle time. Overloading means PLC doesn't have enough resource to complete the task. An infinite loop is the most common one to cause overloading (> 100%). This document will show how to monitor the PLC load and set watchdog for each task.

■ Brief Solution - Step by Step:

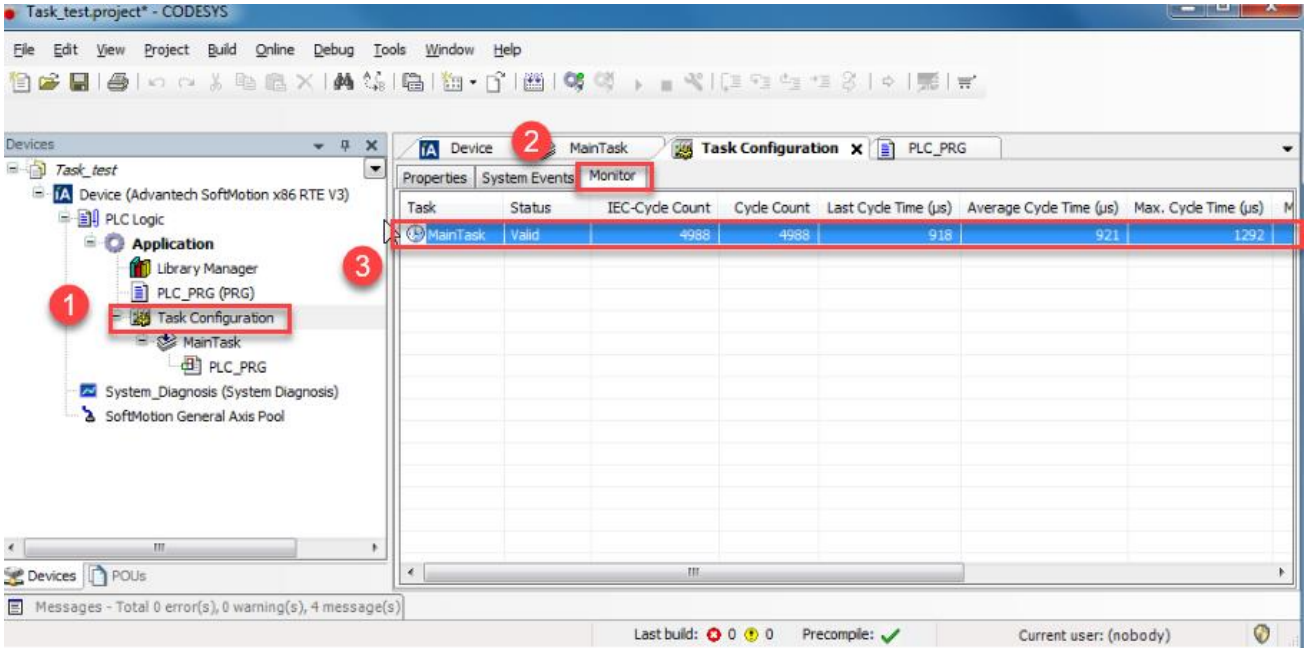
Right click RTE icon and click **PLC Configuration**.



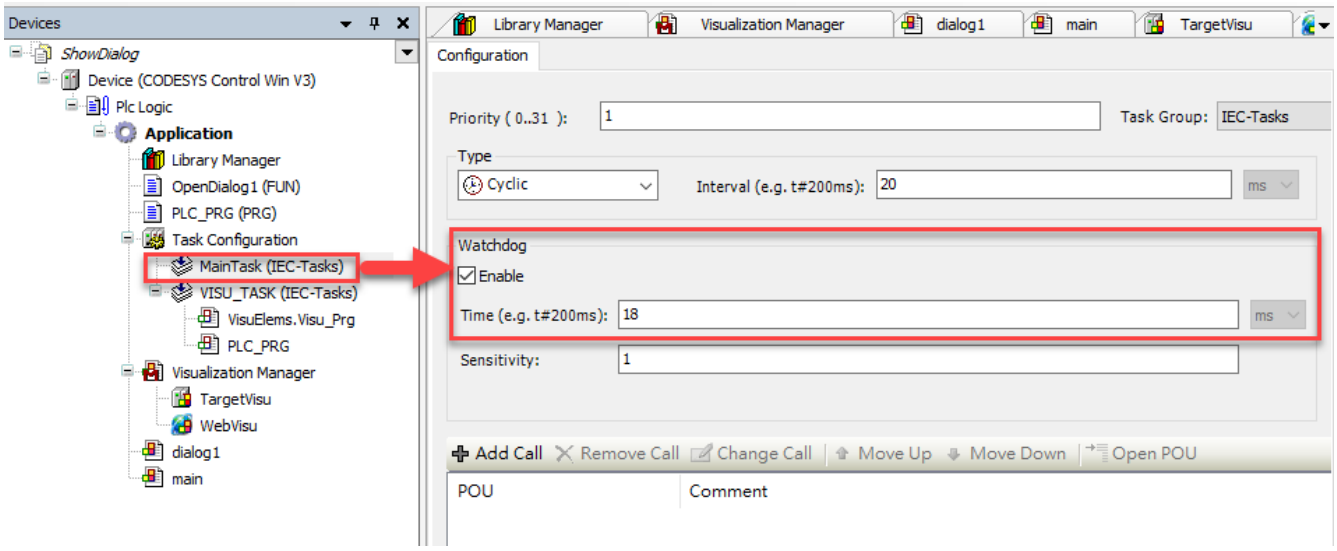
This page will show kernel information and kernel state. PLC Load is showed below:



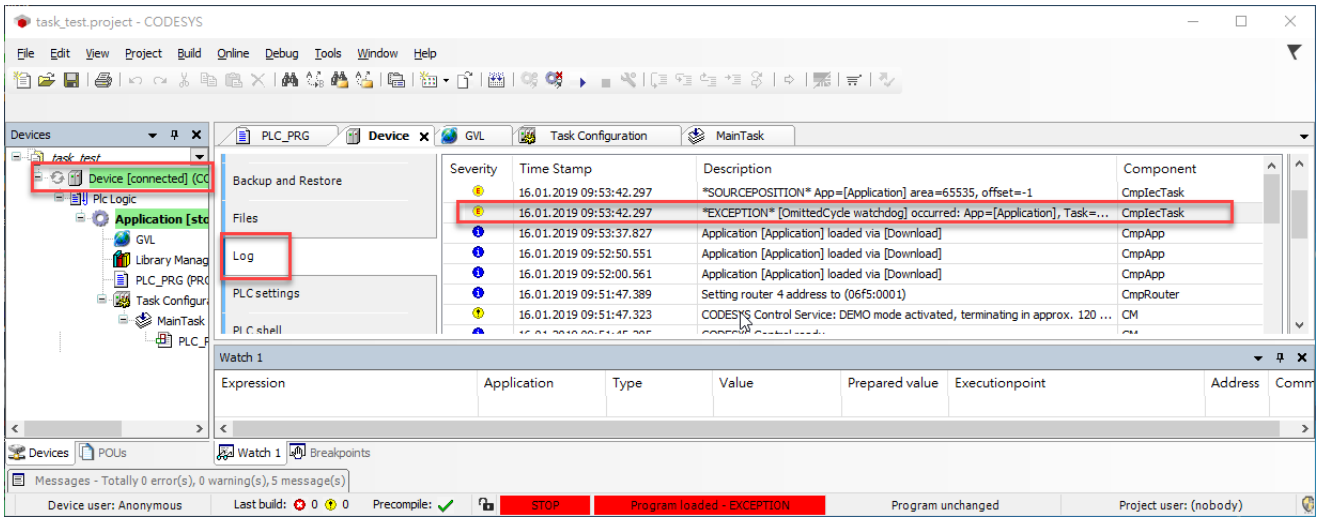
Task cycle time can be monitored in **Task Configuration**. (online mode only)



If task cycle time is very close to the task interval, PLC load will be high. Moreover, if task cycle time is more than the task interval, PLC load will exceed 100% and performance become low. Thus, setting watchdog is neccesary to aware of unexpected cycle time. Watchdog is enabled in each task page.



When task cycle time exceeds the watchdog time, PLC will **stop** and **report exception error** as below: Please examine task's POUs and adjust the task interval if necessary.



- **Reference:**
  https://help.codesys.com/webapp/_cds_dlg_rtev3_system_configuration;product=core_codesys_control;version=3.5.13.0