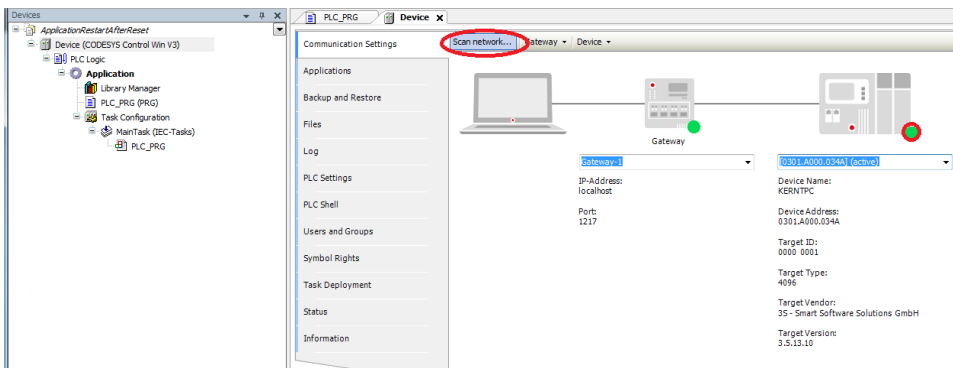
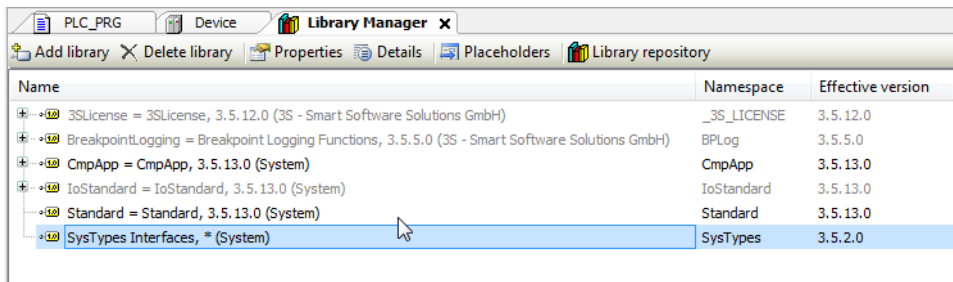


Automatic Restart of the Application after Resetting from IEC Code

- Create a "Standard project" and select *CODESYS Control Win V3* as the device.
- Define the target system by means of the *Network scan*.



- Open the *Library Manager* and add the following libraries:
CmpApp
SysTypes2 interfaces



- Create a persistent variable named *PersistentVars*.

Adapt *PersistentVars* as follows:

Declaration

```
{attribute 'qualified_only'}
VAR_GLOBAL PERSISTENT RETAIN
    xAutoRestart    : BOOL;
    udiCnt          : UDINT;
END_VAR
```

- Adapt the POU *PLC_PRG* as follows:

Declaration

```

VAR
    sAppName      :   STRING := 'Application';
    result         :   RTS_IEC_RESULT;

    pApp           :   POINTER TO CmpApp.APPLICATION;
    udiState       :   UDINT;
    udiOpState     :   UDINT;
    xInit          :   BOOL := TRUE;
    xReset         :   BOOL;
END_VAR

```

Implemen
tation

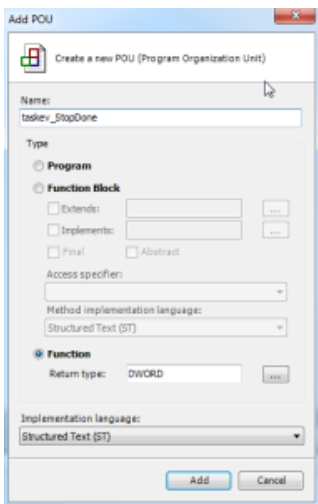
```

IF xInit THEN
    pApp := CmpApp.AppFindApplicationByName(pszString := sAppName, pResult := ADR(result));
    xInit := False;
    PersistentVars.xAutoRestart := False;
END_IF

IF xReset THEN
    xReset := FALSE;
    PersistentVars.xAutoRestart := True;
    CmpApp.AppReset(pApp := pApp, usResetOption := CmpApp.RTS_RESET);
END_IF

```

- Create a new function named *taskew_StopDone* with the return type *DWORD*.



Then adapt the function as follows:

Declaration

```

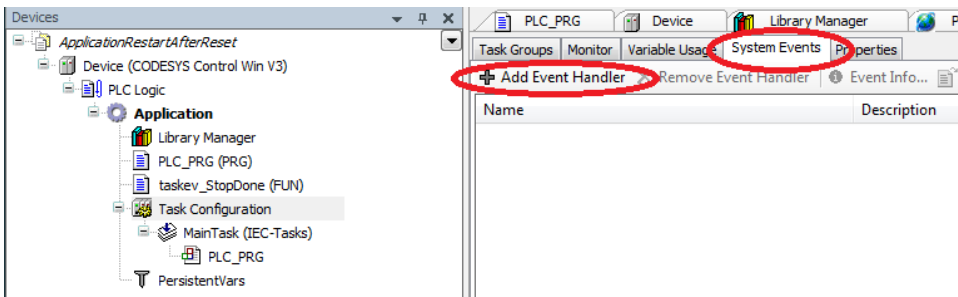
FUNCTION taskew_StopDone : DWORD
VAR_INPUT
    EventPrm: CmpApp.EVTPARAM_CmpAppStop;
END_VAR
VAR
END_VAR

```

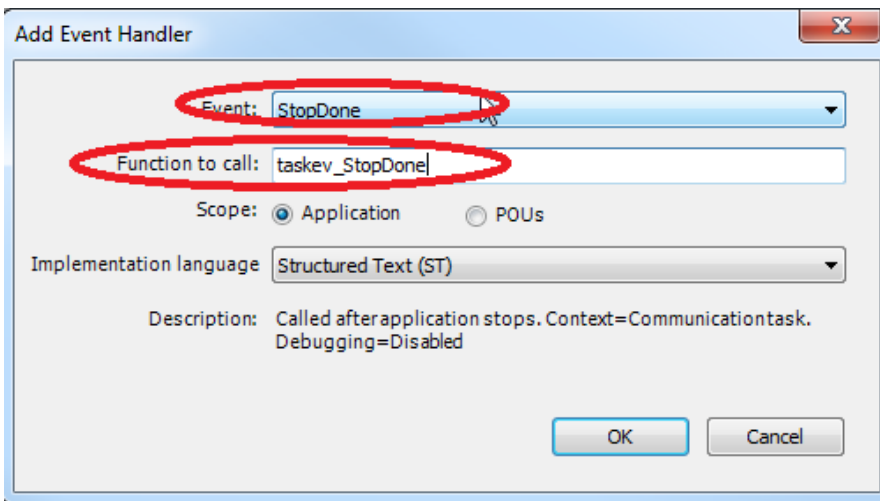
Implementa-
tion

```
IF PersistentVars.xAutoRestart THEN
    PersistentVars.udiCnt := PersistentVars.udiCnt + 1;
    CmpApp.AppStartApplication(PLC_PRG.pApp);
END_IF
```

- Open the tab in the task configuration:

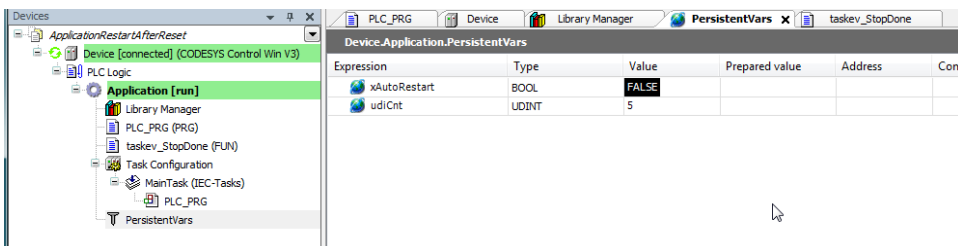


Create a new event of type *StopDone* and assign the function *taskev_StopDone* to it.



Task Groups	Monitor	Variable Usage	System Events	Properties	
+ Add Event Handler ✕ Remove Event Handler ⓘ Event Info... ⓘ Open Event Function					
Name	Description	Context	Debugging	Function to call	Active
✔ StopDone	Called after application stops	Communication task	✖	taskev_StopDone	☒

- Start the project and set the variable *xReset* to *TRUE* in order to index it.





The variable `PersistentVars.udlCnt` is incremented **from the application** with each restart.