Procedure to Generate Alarms with External Time Stamp in CHMI

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Audience

The document is targeted at Compact HMI (CHMI) users who need to learn the procedure to generate alarms with external time stamp. The audience shall know the basic functions of Compact Control Builder and CHMI. The procedure explained in this article is applicable for all versions of Compact HMI.

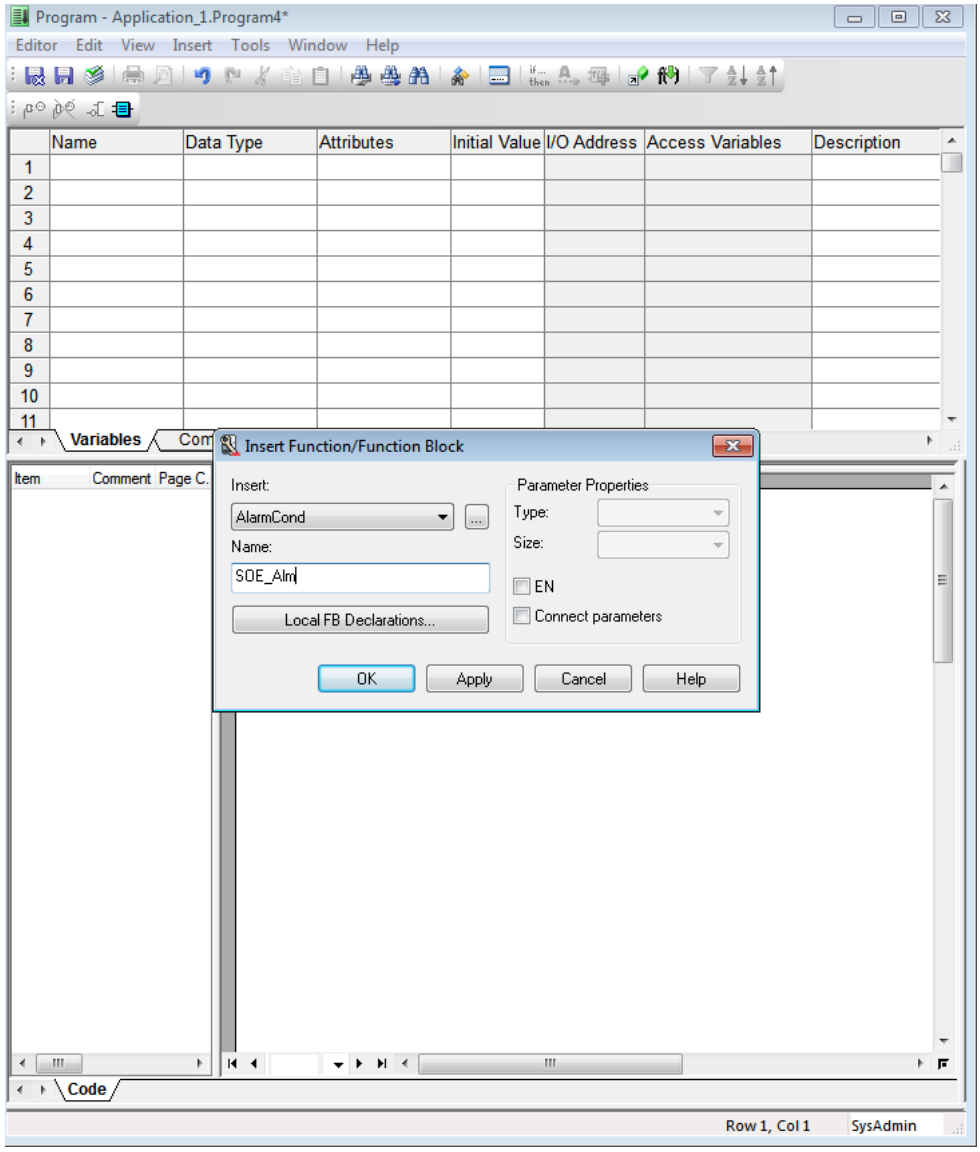
Introduction

Normally in CHMI we generate alarms directly from the OPC via Alarm and Event Configuration aspect. The alarms generated in this fashion will bear the time stamp of the OPC server. Certain projects use SOE modules like DI830 to meet the process requirements. Under such circumstances the system is expected to generate alarms with external time stamp (time stamped by SOE module). In System 800xA this can be achieved easily by just using an AlarmCond function block but CHMI needs some additional configurations to achieve this. This document explains those additional configurations.

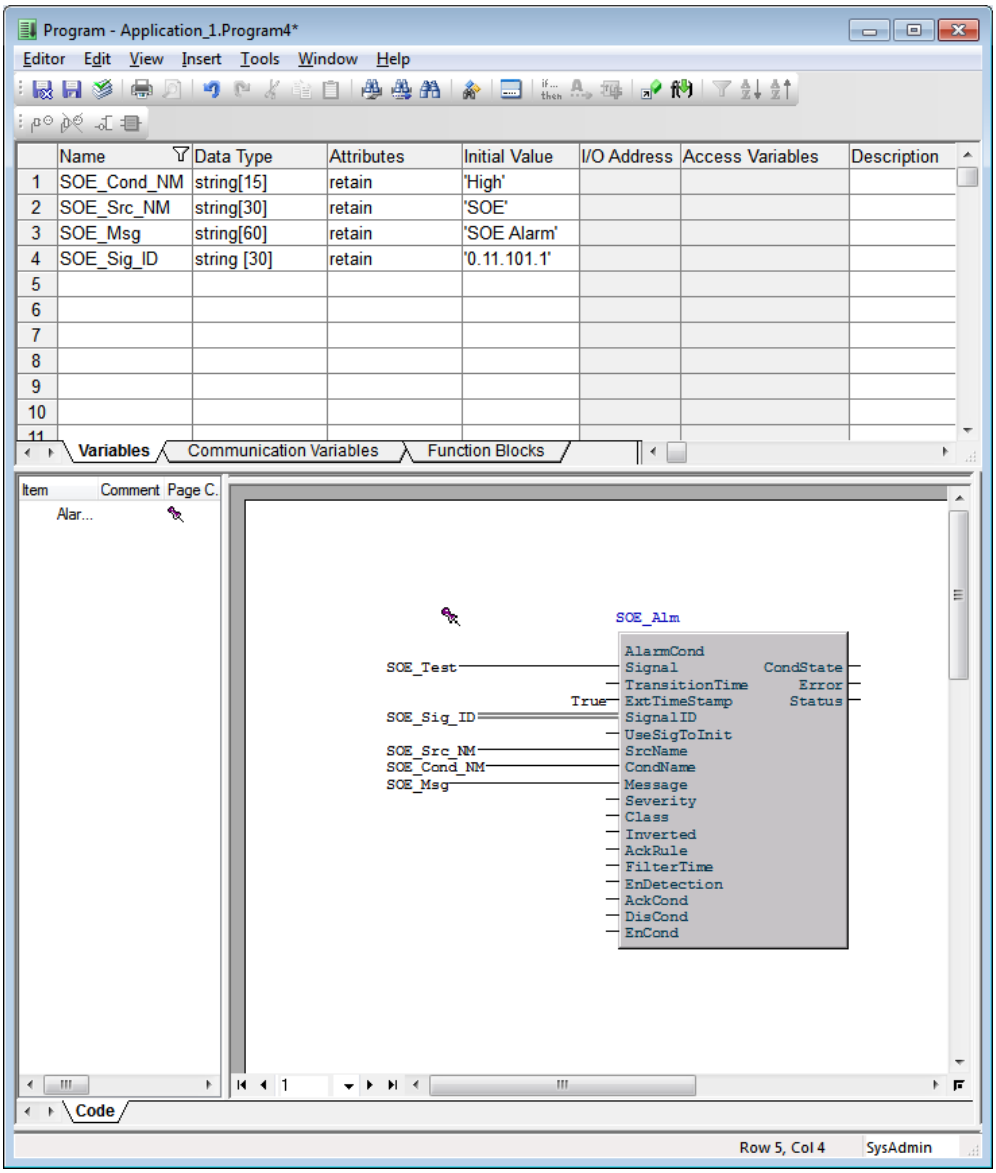
Procedure

Configuration in Compact Control Builder

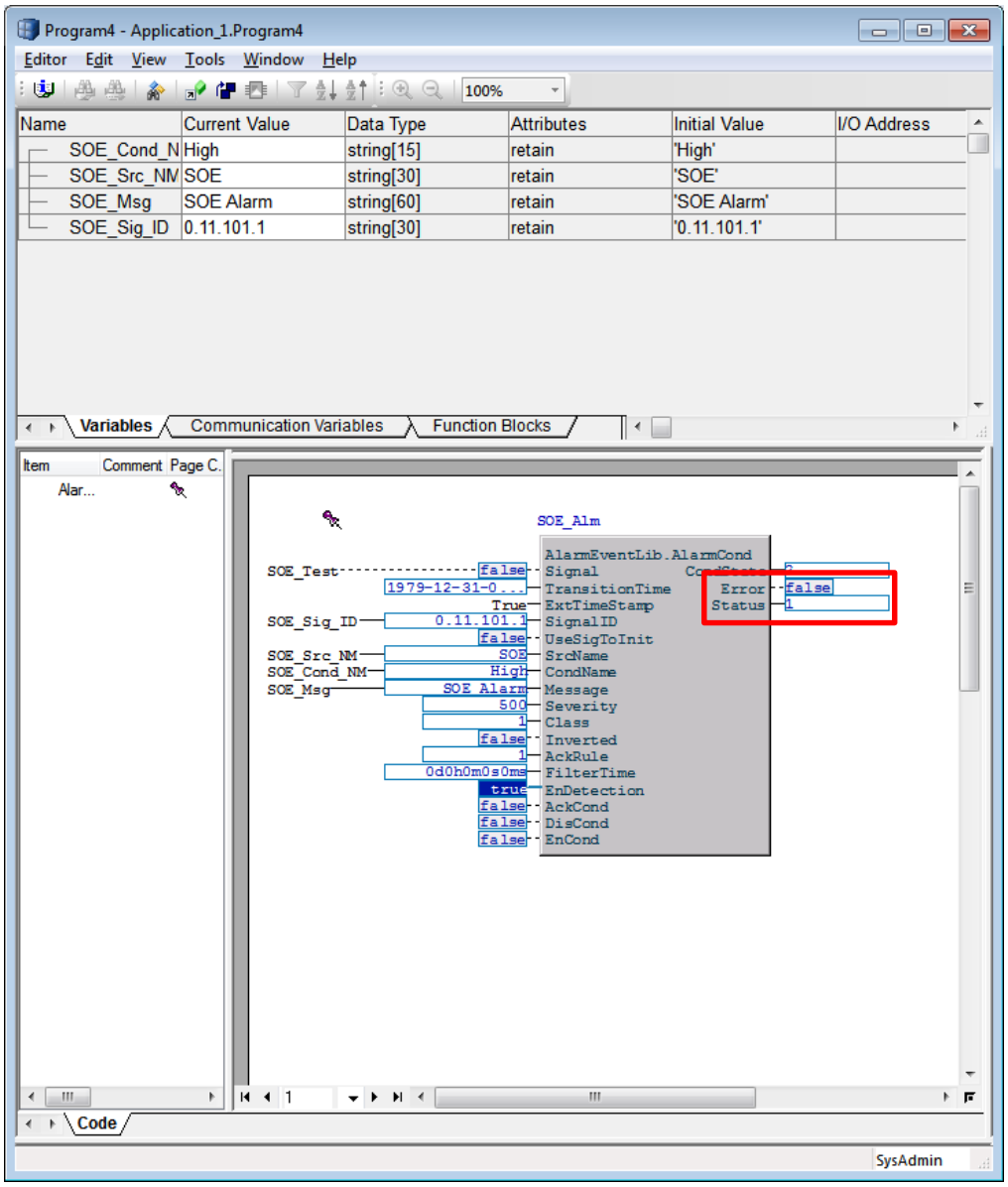
1. Open a program in Compact Control Builder and insert an AlarmCond block.



2. Connect variables with appropriate initial values to Signal, SignalID, SrcName, CondName, Message, Class and Severity. Make ExtTimeStamp true.

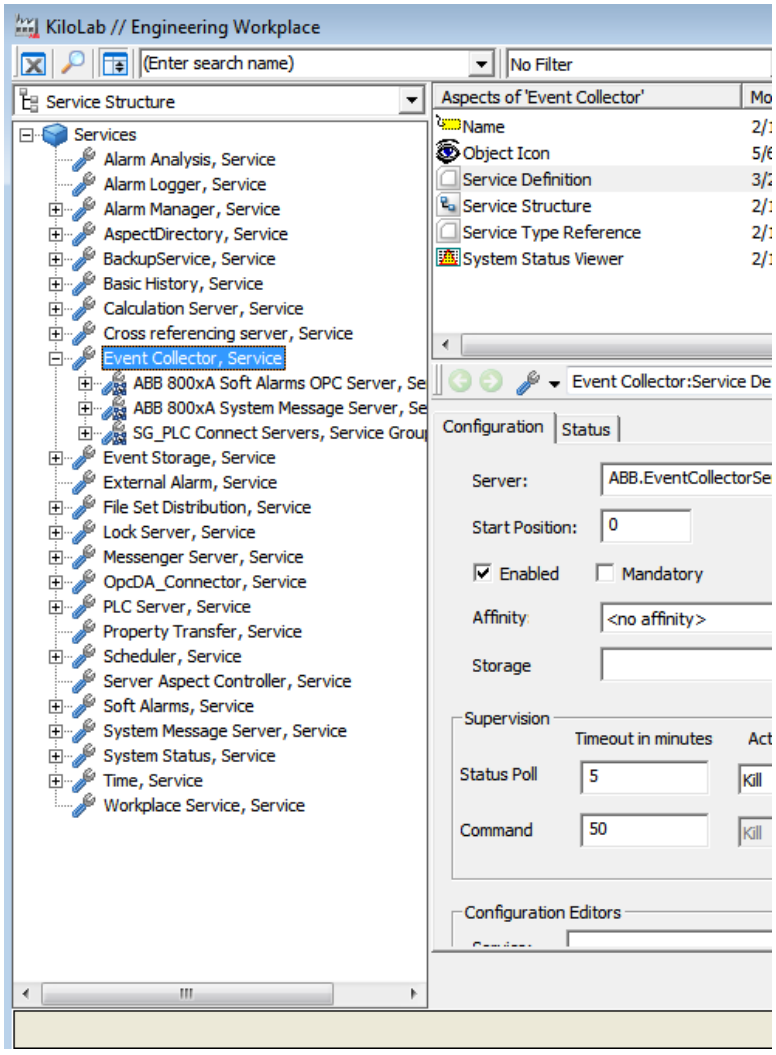


3. Save and close the program and download it to the controller. In online mode the program would appear as below. Ensure that the **Status = 1** and **Error = False.**

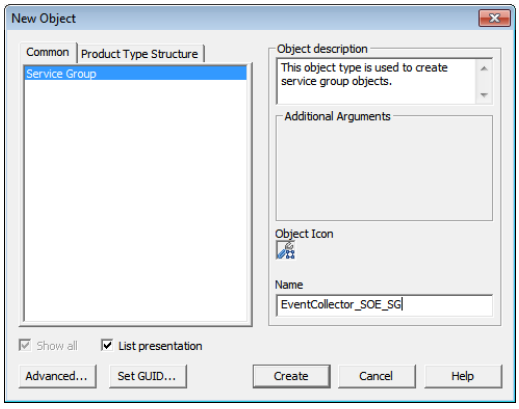


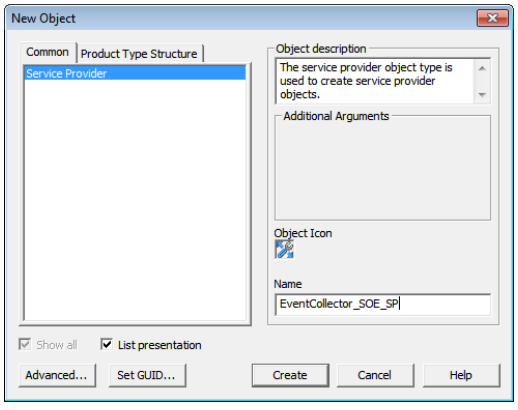
Configuration in Plant Explorer

1. Open Plant Explorer and traverse to Service Structure>Event Collector Service.

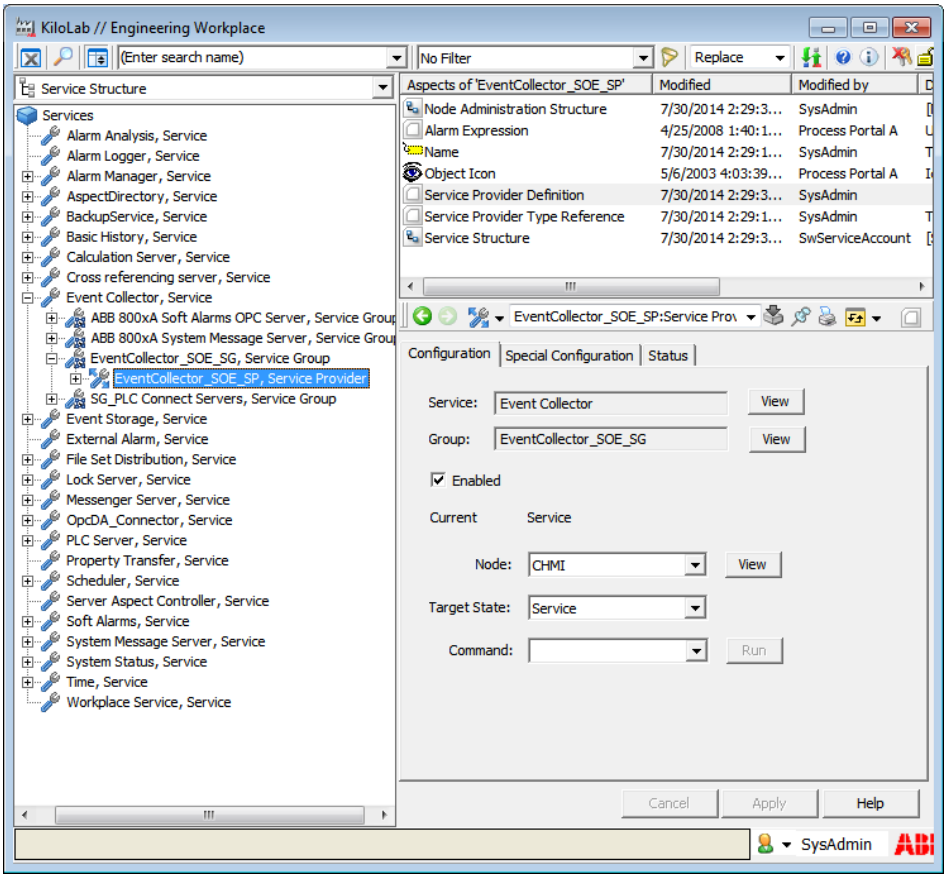


2. Create a new Service Group and a Service Provider under Event Collector Service.

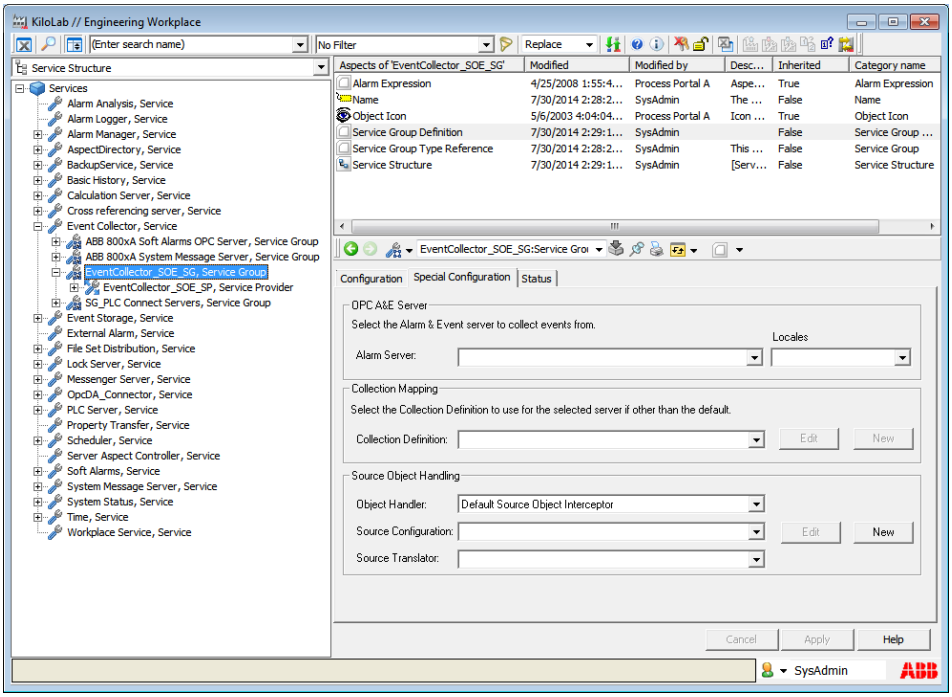




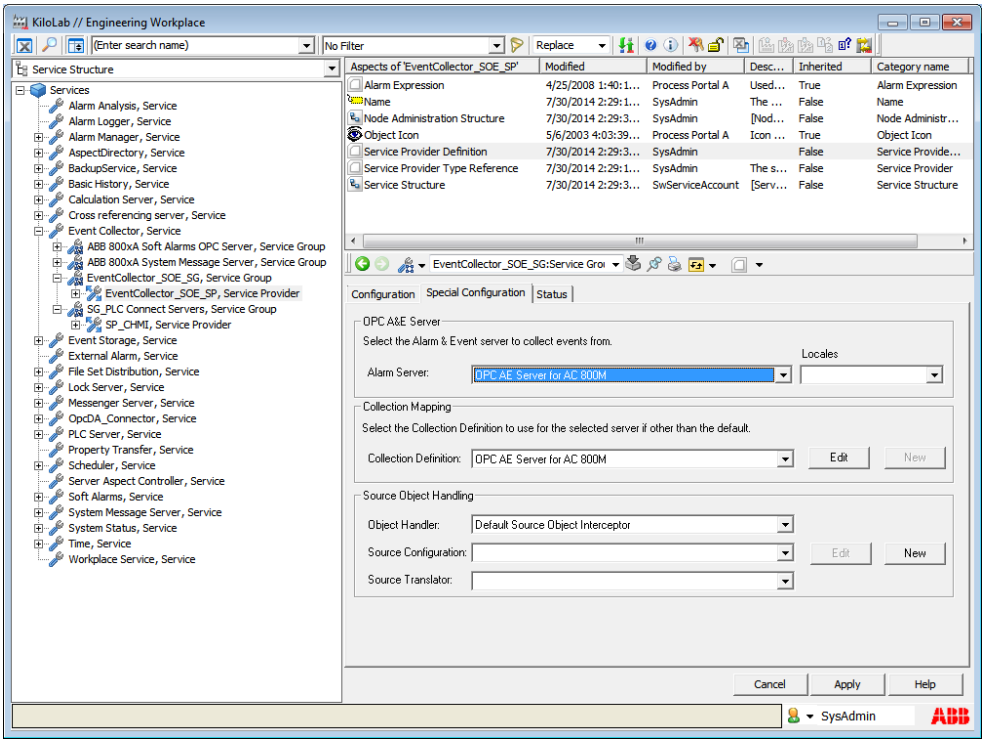
3. In the newly created Service Provider, select Service Provider Definition aspect. Choose CHMI server node from the drop down list against Node.
4. Check Enable and press Apply. Ensure the service provider goes to Service state.



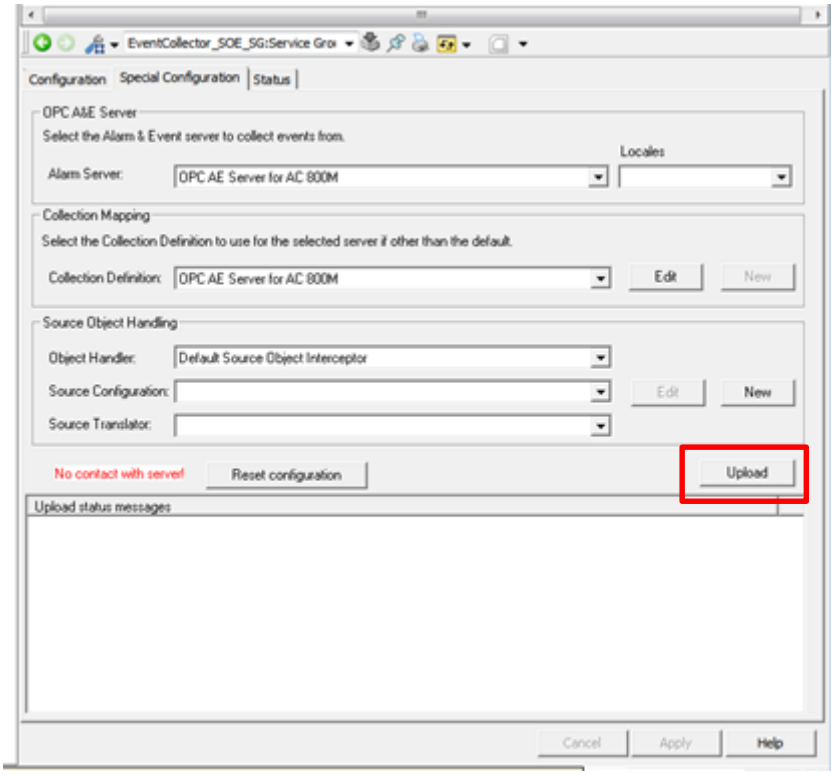
5. Click on the Service Group created in step 2 and select Service Group Definition aspect. Click on Special Configuration Tab.



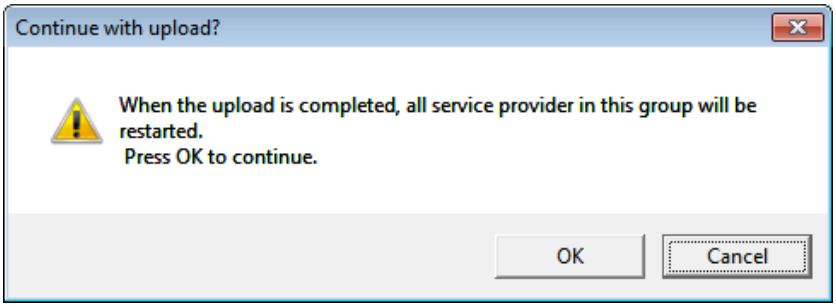
6. In the Alarm Server drop down menu select **OPC AE Server for AC800M.**



7. Click Apply. An Upload button will appear at the bottom.

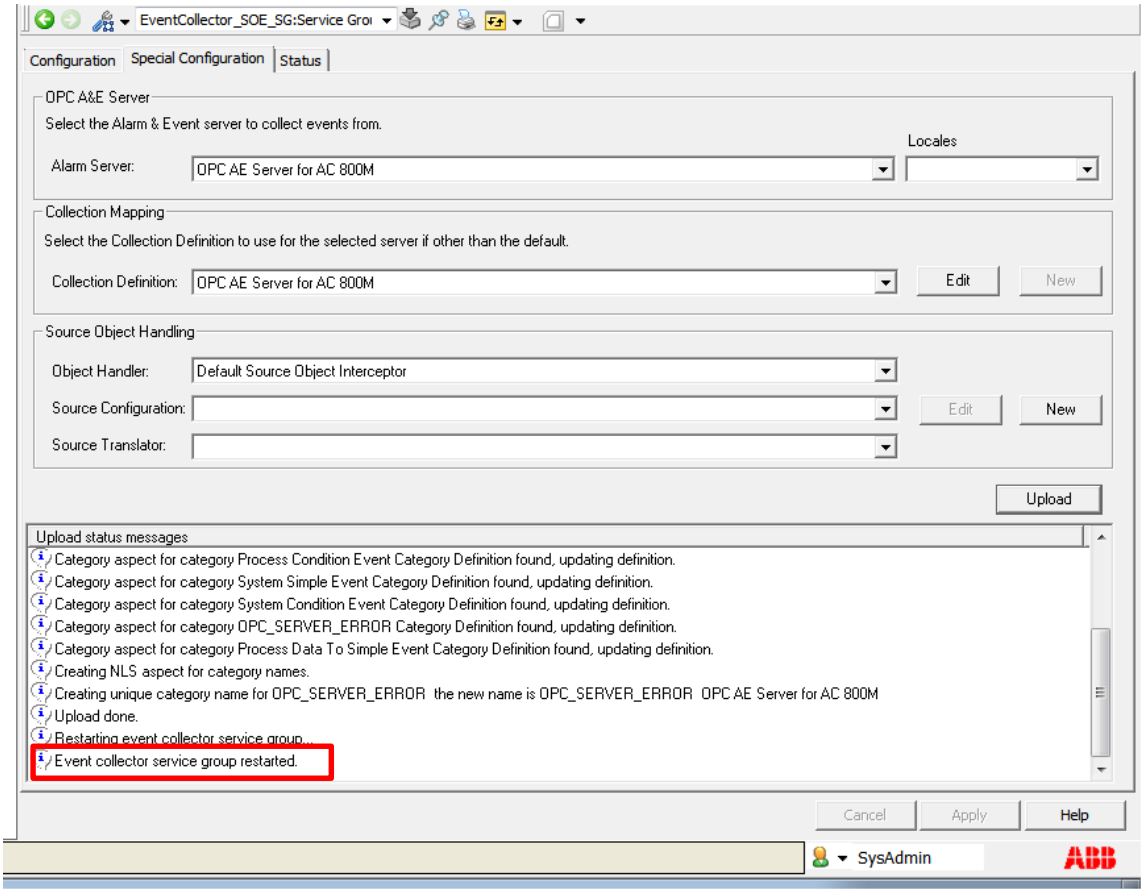


8. Press the Upload button and press **OK** in the Confirmation Window.

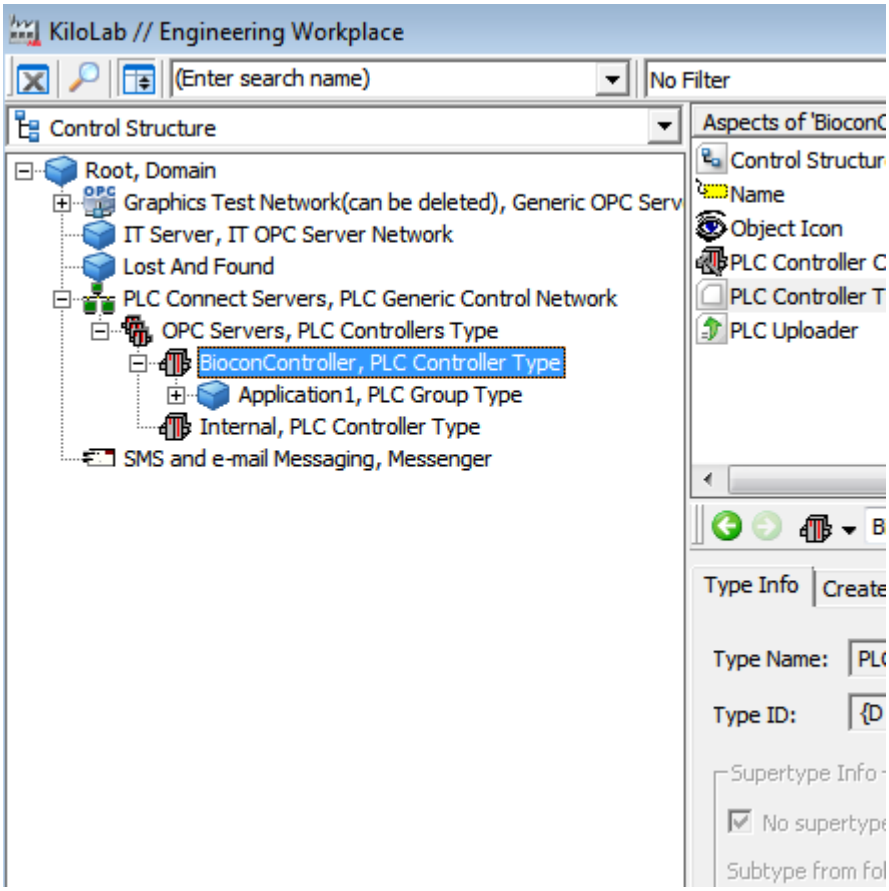


This will upload the new settings into the event collector service and the service will restart. If this procedure is being followed in a production environment then crosses will be observed on the alarm band and no events will get updated when the service is restarting.

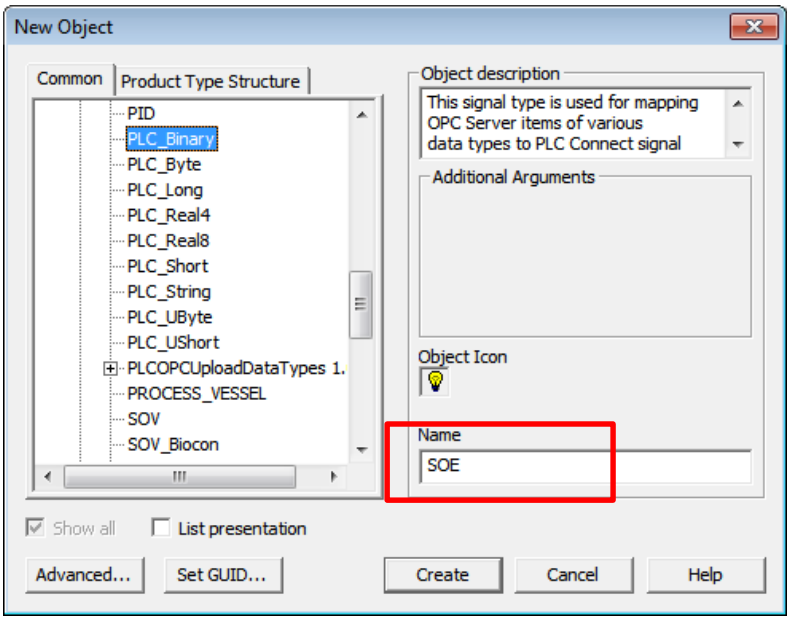
9. Wait until *Event collector service group restarted* message appears in Upload status messages window.

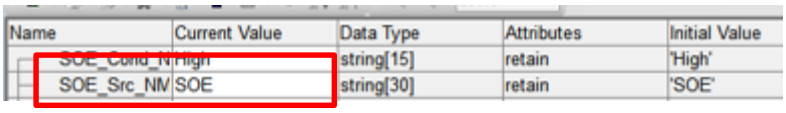


10. Traverse to Control Structure > PLC Generic Control Network > PLC Controller Type



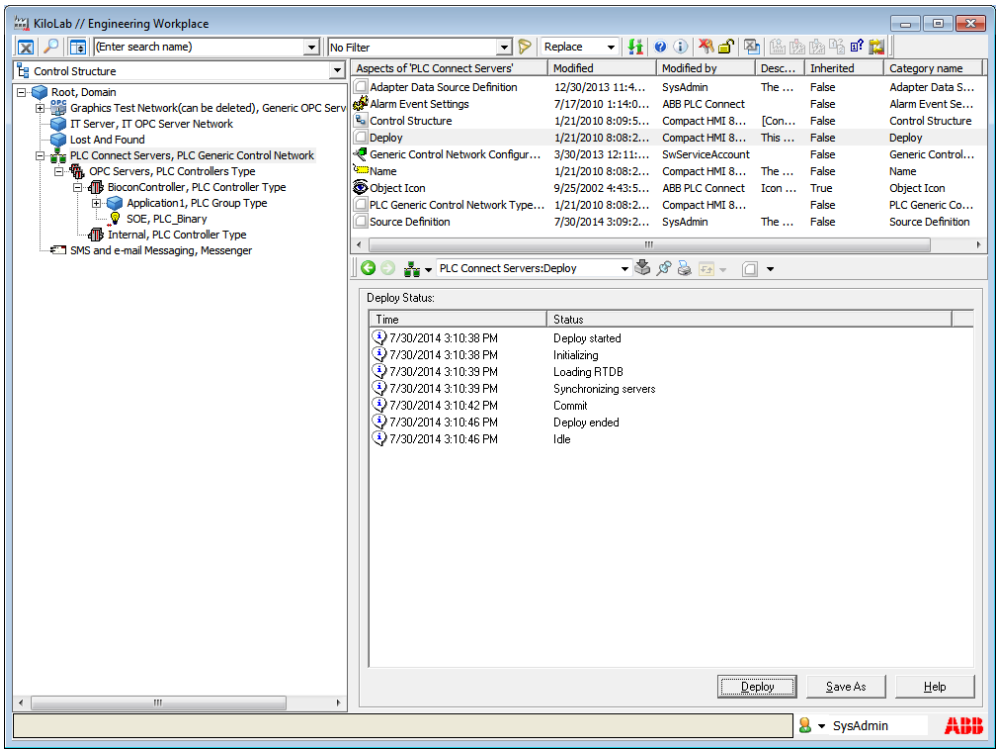
11. Insert a PLC_Binary object under the PLC Controller Type. Ensure that the name of the PLC_Binary object is exactly same as the SrcName of the AlarmCond block created in the Compact Control Builder.



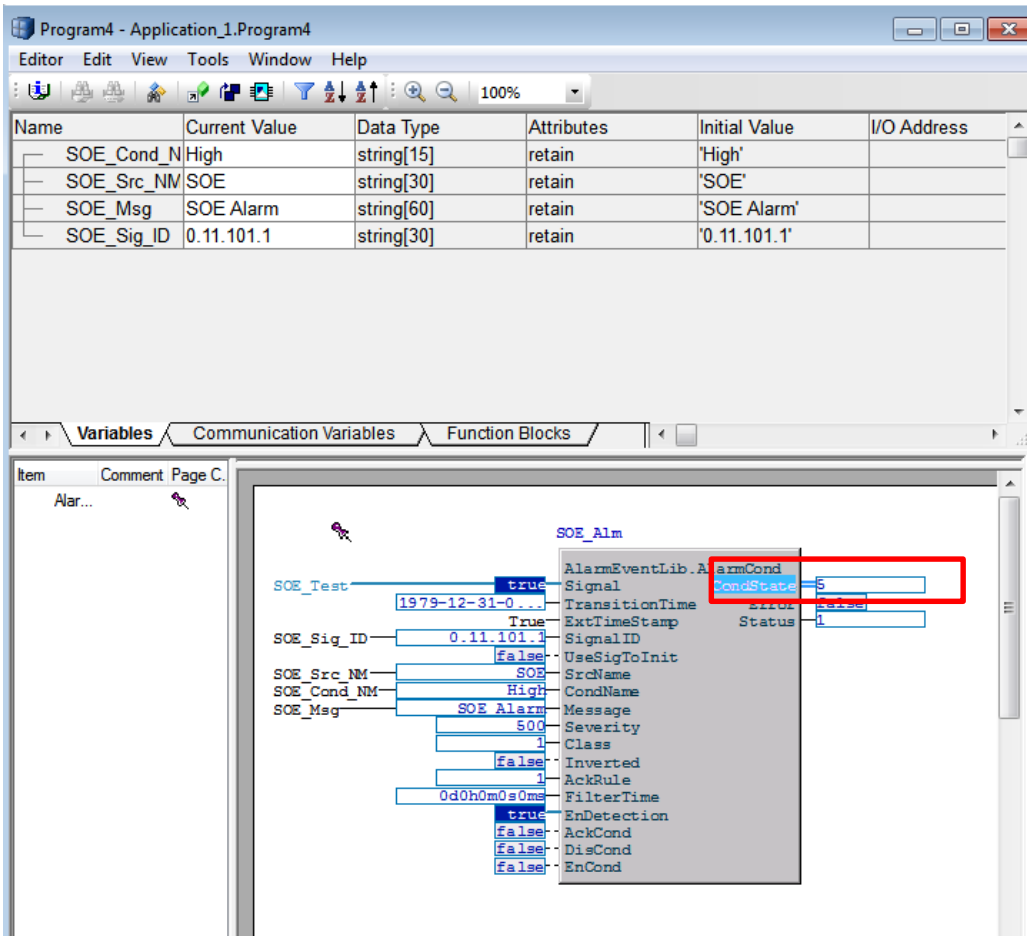


Name	Current Value	Data Type	Attributes	Initial Value
SOE_Cond_N	High	string[15]	retain	'High'
SOE_Src_NM	SOE	string[30]	retain	'SOE'

12. Deploy the Control Structure. Ensure not to connect anything in the signal configuration and not to enable alarm or event in the Alarm and Event Configuration aspect.



13. Simulate the signal connected to the AlarmCond and check if the CondState in the AlarmCond block has changed to state 5.



14. . Check the alarm list for the corresponding alarm with external time stamp. Uncategorized Alarms should be enabled in the alarm list filter configuration to view these alarms in the alarm list.