

PO2021 如何更改角色默认的报警操作权限

问题描述:

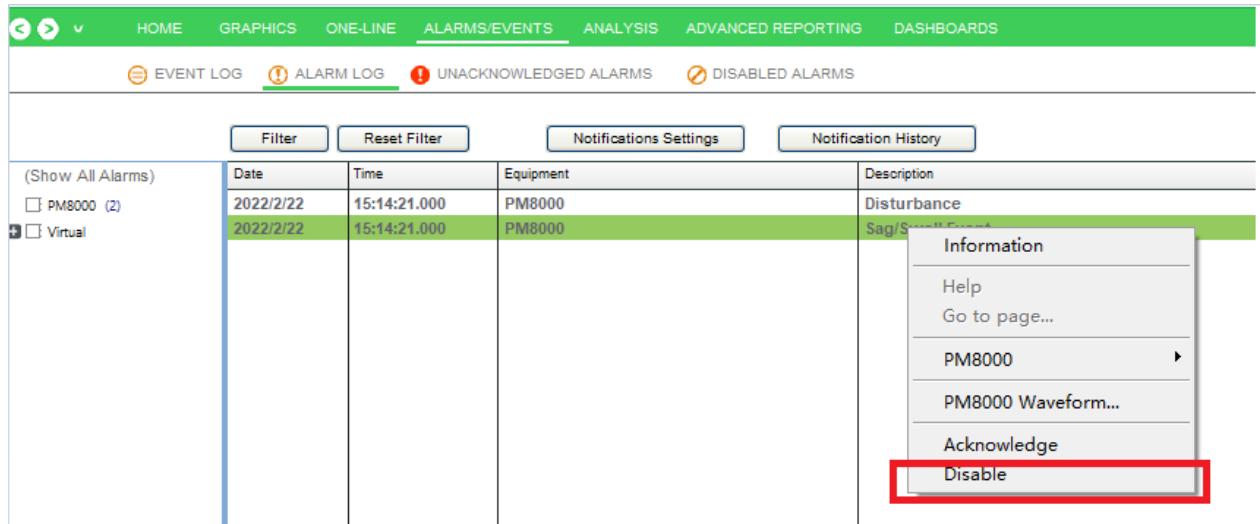
如何更改角色默认的报警操作权限，使之实现本来无法实现的操作

解决方案:

1、 报警操作权限与所属角色的访问级别有关，如报警配置权限的访问级别需要 6 及以上

说明	访问级别标签	访问级别值	角色/全局权限				
			操作员 1	操作员 2	工程师	管理员	内核
断路器, 开关控制	PL_Sec_CBCControl	1		X	X	X	X
IED 配置	PL_Sec_IEDConfig	2			X	X	X
断路器标记	PL_Sec_Tagging	3			X	X	X
报警确认	PL_Sec_AlmAck	4	X	X	X	X	X
报警删除	PL_Sec_AlmDelete	5			X	X	X
报警配置	PL_Sec_AlmConfig	6			X	X	X
添加/删除登录用户	PL_Sec_UserConfig	7				X	X

2、因此角色访问级别 ≥ 6 的角色（即拥有报警配置权限）才可以启用或禁用报警



The screenshot shows the Schneider Electric PM8000 software interface. The top navigation bar includes HOME, GRAPHICS, ONE-LINE, ALARMS/EVENTS (which is selected), ANALYSIS, ADVANCED REPORTING, and DASHBOARDS. Below the navigation bar, there are tabs for EVENT LOG, ALARM LOG (which is selected), UNACKNOWLEDGED ALARMS, and DISABLED ALARMS. The main area displays an ALARM LOG table with two entries:

Date	Time	Equipment	Description
2022/2/22	15:14:21.000	PM8000	Disturbance
2022/2/22	15:14:21.000	PM8000	Sag/Surge Event

A context menu is open over the second alarm entry for 'PM8000'. The menu items are: Information, Help, Go to page..., PM8000, PM8000 Waveform..., Acknowledge, and Disable. The 'Disable' option is highlighted with a red box.

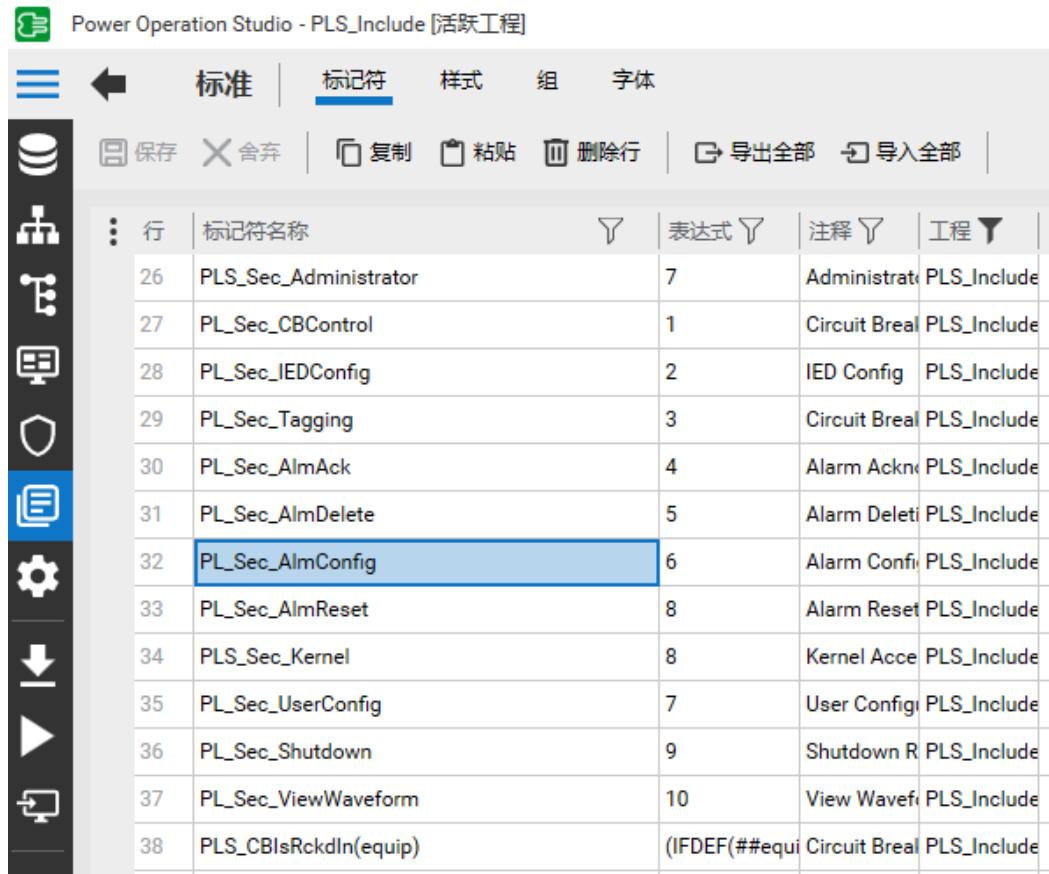
3、现在想实现除了角色访问级别=8 的其他角色无法启用或禁用报警，就需要去 Cicode 中对其代码进行更改

4、首先激活 PLS_Include 工程:

Include	8.30.0000
> Library_Controls	8.30.0000
> Library_Equipment	8.30.0000
> PLS_Example	9.2.0000
> PLS_Include	活跃工程 9.2.0000
> Project1	9.2.0000
> PSO_Equipment	9.2.0000

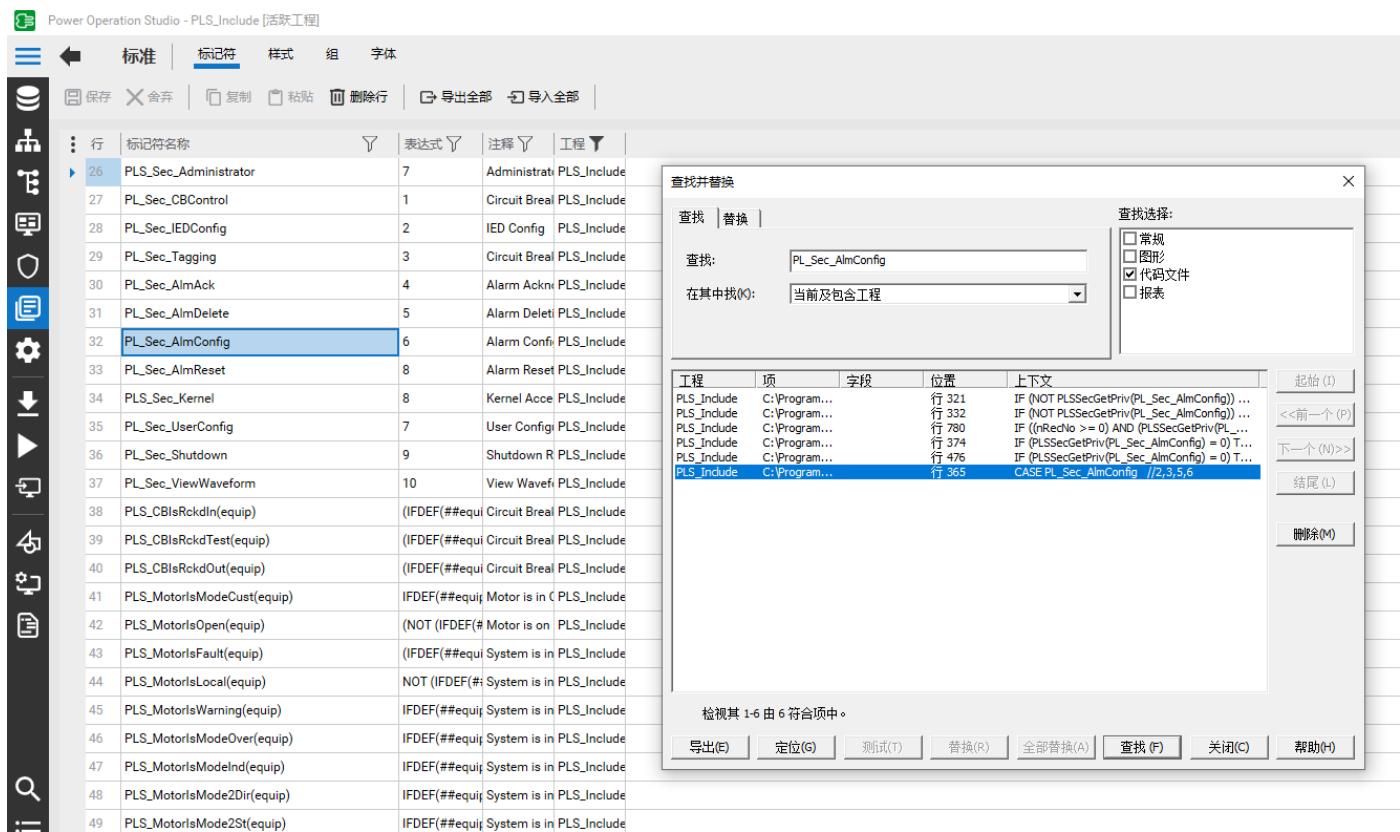
- 5、然后进入左侧标准，标记符页面，找到函数 PL_Sec_AlmConfig，复制这个函数

Power Operation Studio - PLS_Include [活跃工程]



行	标记符名称	表达式	注释	工程
26	PLS_Sec_Administrator	7	Administrator	PLS_Include
27	PL_Sec_CBControl	1	Circuit Breaker	PLS_Include
28	PL_SecIEDConfig	2	IED Config	PLS_Include
29	PL_Sec_Tagging	3	Circuit Breaker	PLS_Include
30	PL_Sec_AlmAck	4	Alarm Acknowledgment	PLS_Include
31	PL_Sec_AlmDelete	5	Alarm Delete	PLS_Include
32	PL_Sec_AlmConfig	6	Alarm Configuration	PLS_Include
33	PL_Sec_AlmReset	8	Alarm Reset	PLS_Include
34	PLS_Sec_Kernel	8	Kernel Access	PLS_Include
35	PL_Sec_UserConfig	7	User Configuration	PLS_Include
36	PL_Sec_Shutdown	9	Shutdown Request	PLS_Include
37	PL_Sec_ViewWaveform	10	View Waveform	PLS_Include
38	PLS_CBIsRckdIn(equip)	(IFDEF(##equip)	Circuit Breaker	PLS_Include

- 6、然后点击左侧搜索，打开查找并替换页面，在查找栏填入 PL_Sec_AlmConfig，查找选择只勾选代码文件，点击下方查找，出现如图界面：



The screenshot shows the Power Operation Studio interface with a search dialog open. The search term 'PL_Sec_AlmConfig' is found in the code. The results table shows the context of each find, such as 'CASE PL_Sec_AlmConfig //2,3,5,6'.

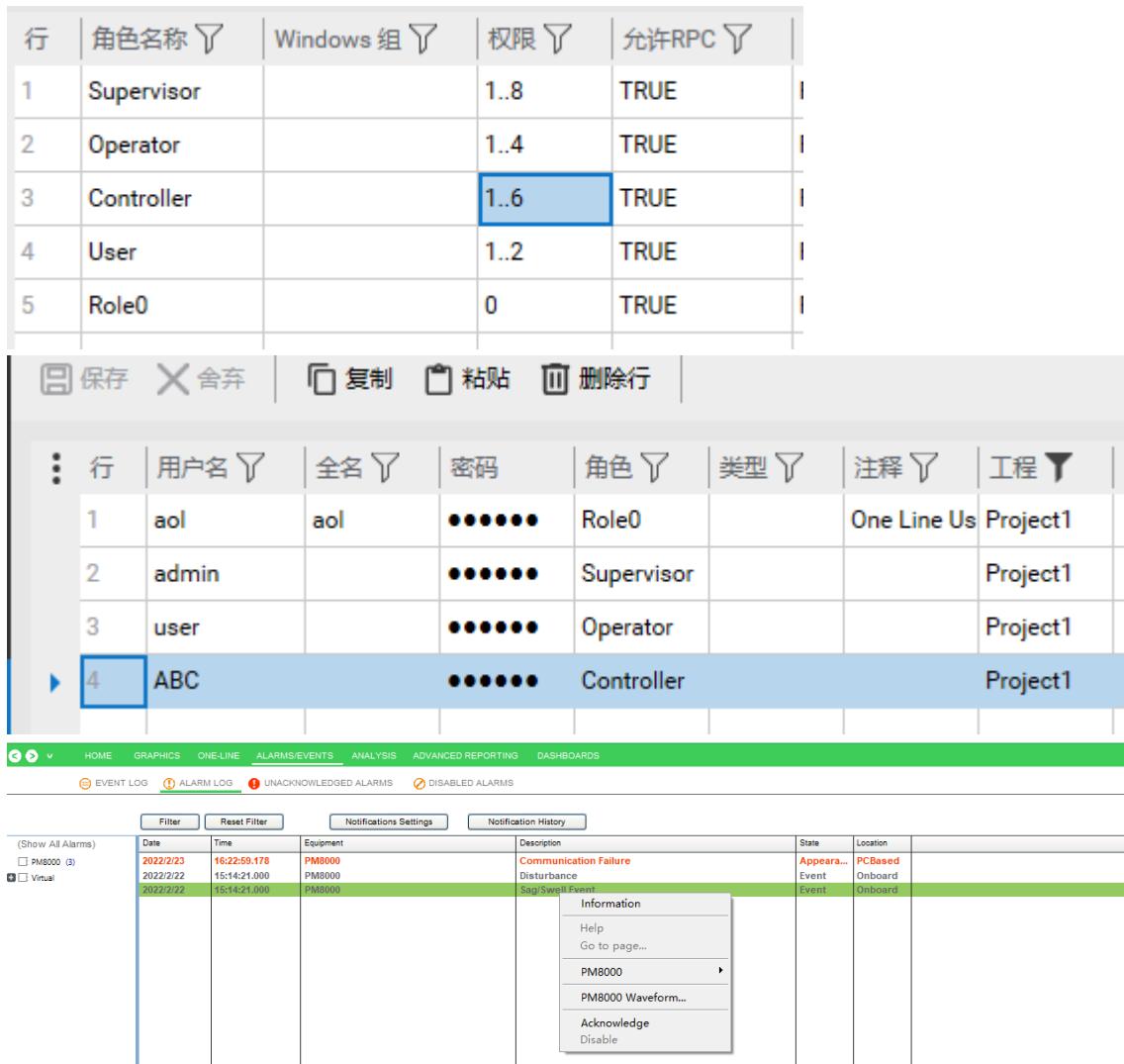
7、双击查找结果中的最后一行，打开该函数所在的位置，函数如下：

```
CASE PL_Sec_IEDConfig, PL_Sec_Tagging, PL_Sec_AlmDelete, PL_Sec_AlmConfig //2,3,5,6
IF (GetPriv(PLS_Sec_Engineer,0) OR
GetPriv(PLS_Sec_Administrator,0) OR
GetPriv(PLS_Sec_Kernel,0)) AND
PLSIsControlClientOrServer() THEN
RETURN 1;
END
```

8、其中 PL_Sec_AlmConfig 适用于禁用启用报警的语句，可以把它单独摘出来，做如下处理，让禁用启用报警的功能只有 8 的角色（也就是 Kernel）才能使用。

```
CASE PL_Sec_IEDConfig, PL_Sec_Tagging, PL_Sec_AlmDelete //2,3,5,6
IF (GetPriv(PLS_Sec_Engineer,0) OR
GetPriv(PLS_Sec_Administrator,0) OR
GetPriv(PLS_Sec_Kernel,0)) AND
PLSIsControlClientOrServer() THEN
RETURN 1;
END
CASE PL_Sec_AlmConfig //2,3,5,6
IF (GetPriv(PLS_Sec_Kernel,0)) AND
PLSIsControlClientOrServer() THEN
RETURN 1;
END
```

9、这样处理后，保存。创建一个访问等级为 6 或 7 的用户，登录运行页面，在任意报警行点击鼠标右键，查看是否能启用或禁用报警，发现该选项已变灰。



The screenshot shows two tables and a bottom navigation bar.

Top Table (User Roles):

行	角色名称	Windows 组	权限	允许RPC
1	Supervisor		1.8	TRUE
2	Operator		1.4	TRUE
3	Controller		1.6	TRUE
4	User		1.2	TRUE
5	Role0		0	TRUE

Bottom Table (Users):

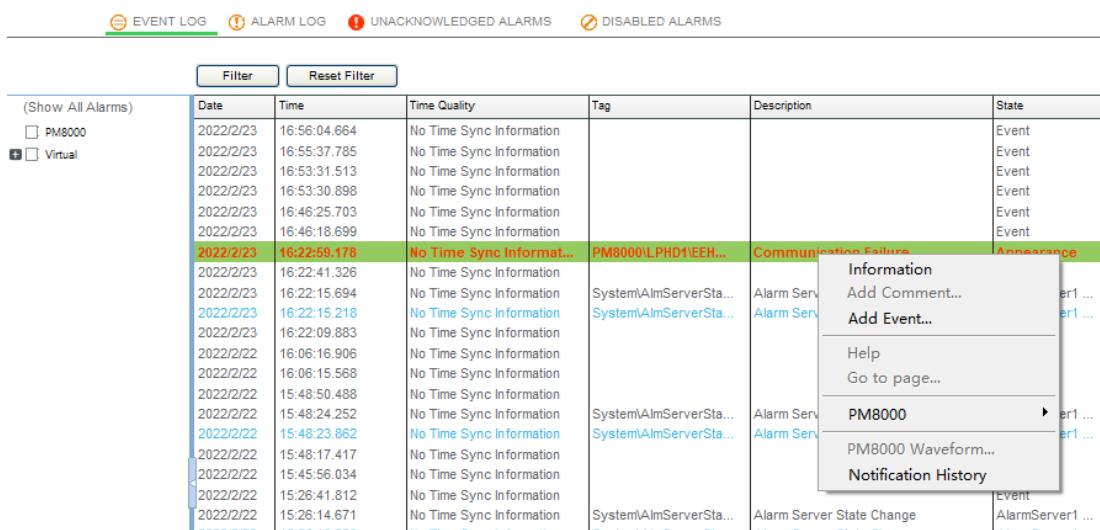
行	用户名	全名	密码	角色	类型	注释	工程
1	aol	aol	*****	Role0		One Line Us	Project1
2	admin		*****	Supervisor			Project1
3	user		*****	Operator			Project1
4	ABC		*****	Controller			Project1

Bottom Navigation Bar:

- HOME GRAPHICS ONE-LINE ALARMS/EVENTS ANALYSIS ADVANCED REPORTING DASHBOARDS
- EVENT LOG ALARM LOG UNACKNOWLEDGED ALARMS DISABLED ALARMS
- Filter Reset Filter Notifications Settings Notification History

A context menu is open over an alarm entry in the event log table, showing options like "Information", "Help", "Go to page...", "PM8000", "PM8000 Waveform...", "Acknowledge", and "Disable".

10、此时如果进入 EVENT LOG 界面，随便右键点击一个事件，发现 Add Comment 也变灰无法操作了



The screenshot shows the event log table with a context menu open over an alarm entry.

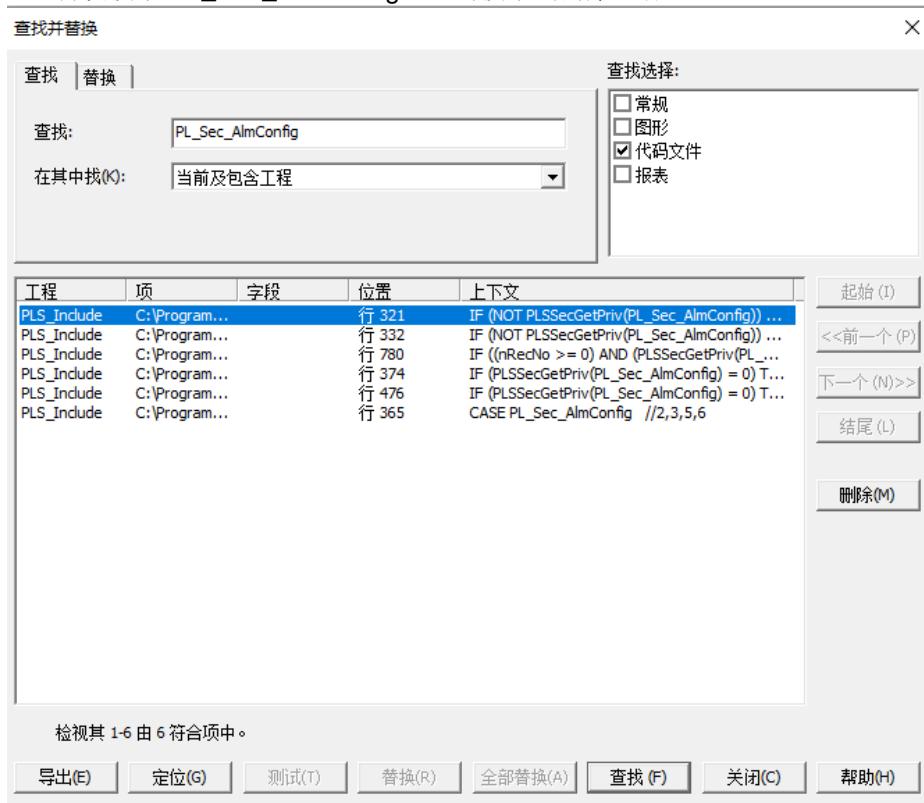
Event Log Table:

Date	Time	Equipment	Description	State	Location
2022/2/23	16:22:59.178	PM8000	Communication Failure	Appeared	PCBased
2022/2/22	15:14:21.000	PM8000	Disturbance	Event	Onboard
2022/2/22	15:14:21.000	PM8000	Sag/Swell Event	Event	Onboard

Context Menu (Open over an alarm entry):

- Information
- Help
- Go to page...
- PM8000
- PM8000 Waveform...
- Acknowledge
- Disable
- Information
- Add Comment...
- Add Event...
- Help
- Go to page...
- PM8000
- PM8000 Waveform...
- Notification History

11. 因为启用禁用报警和 Add Comment 的权限都是由函数 `PL_Sec_AlmConfig` 决定的, 所以如果想在没有启用禁用报警的权限下, 仍然能拥有 Add Comment 的功能, 则还是需要修改与 Add Comment 相关的 Cicode
12. 再次搜索 `PL_Sec_AlmConfig`, 双击搜索到的第一行



13. 找到Cicode如下所示

```
// add comment and add even

SELECT CASE listType

CASE 15, 16

    IF (StrToLocalText("@(Comment)") <> AlarmGetDsp(rowAN, "Classification")) THEN

        items = items + 1; nCommentIdx = items;

        IF (NOT PLSSecGetPriv(PL_Sec_AlmConfig)) THEN

            DspPopupMenu(0, "!" + StrToLocalText("@(Add Comment)")+"...");

        ELSE

            DspPopupMenu(0, StrToLocalText("@(Add Comment)")+"...");

    END

```

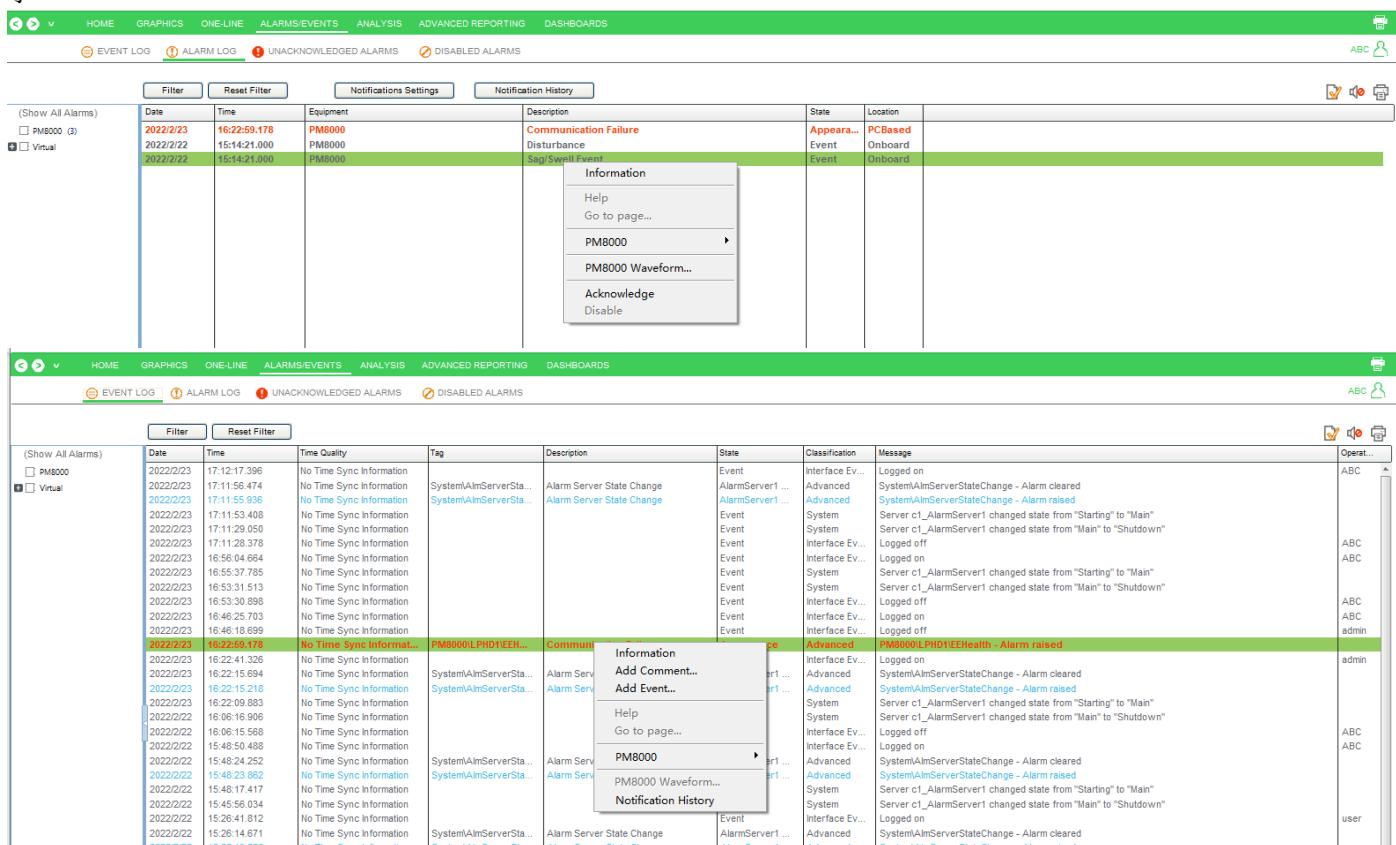
14. 将该段代码中标黄的函数改成访问权限等级更低的函数, 如`PL_Sec_AlmAck`

```

// add comment and add event
SELECT CASE listType
CASE 15, 16
    IF (StrToLocalText("@(Comment)")) <> AlarmGetDsp(rowAN, "Classification")) THEN
        items = items + 1; nCommentIdx = items;
        IF (NOT PLSSecGetPriv(PL_Sec_AlmAck)) THEN
            DspPopupMenu(0, "!" + StrToLocalText("@(Add Comment)")+"..."); 
        ELSE
            DspPopupMenu(0, StrToLocalText("@(Add Comment)")+"..."); 
        END
    END

```

15、保存后，再次用刚刚的用户登录，可以看到，启用禁用报警依然不可用，但是Add Comment的功能已经可以操作了



Date	Time	Equipment	Description	State	Location
2022/2/23	16:22:59.178	PM8000	Communication Failure	Appeared	PCBased
2022/2/22	15:14:21.000	PM8000	Disturbance	Onboard	
2022/2/22	15:14:21.000	PM8000	Sag/Swell Event	Event	Onboard

Date	Time	Time Quality	Tag	Description	State	Classification	Message	Operat...
2022/2/23	17:12:17.396	No Time Sync Information	SystemAlmServerSta...	Alarm Server State Change	Event	Interface Ev...	Logged on	ABC
2022/2/23	17:11:56.474	No Time Sync Information	SystemAlmServerSta...	Alarm Server State Change	AlarmServer1 ...	Advanced	SystemAlmServerStateChange - Alarm cleared	ABC
2022/2/23	17:11:53.408	No Time Sync Information	SystemAlmServerSta...	Alarm Server State Change	AlarmServer1 ...	Advanced	SystemAlmServerStateChange - Alarm raised	ABC
2022/2/23	17:11:29.050	No Time Sync Information	SystemAlmServerSta...	Alarm Server State Change	Event	System	Server c1_AlarmServer1 changed state from "Starting" to "Main"	ABC
2022/2/23	17:11:28.378	No Time Sync Information	SystemAlmServerSta...	Alarm Server State Change	Event	System	Server c1_AlarmServer1 changed state from "Main" to "Shutdown"	ABC
2022/2/23	16:56:04.664	No Time Sync Information	SystemAlmServerSta...	Alarm Server State Change	Event	Interface Ev...	Logged off	ABC
2022/2/23	16:55:37.785	No Time Sync Information	SystemAlmServerSta...	Alarm Server State Change	Event	System	Logged on	ABC
2022/2/23	16:53:11.513	No Time Sync Information	SystemAlmServerSta...	Alarm Server State Change	Event	System	Server c1_AlarmServer1 changed state from "Starting" to "Main"	ABC
2022/2/23	16:53:30.898	No Time Sync Information	SystemAlmServerSta...	Alarm Server State Change	Event	System	Server c1_AlarmServer1 changed state from "Main" to "Shutdown"	ABC
2022/2/23	16:46:25.703	No Time Sync Information	SystemAlmServerSta...	Alarm Server State Change	Event	Interface Ev...	Logged off	ABC
2022/2/23	16:46:18.699	No Time Sync Information	SystemAlmServerSta...	Alarm Server State Change	Event	Interface Ev...	Logged on	ABC
2022/2/23	16:22:59.178	No Time Sync Information	PM8000LPHD1EEH...	Communication Failure	Event	Advanced	PM8000LPHD1EEHHealth - Alarm raised	admin
2022/2/23	16:22:11.326	No Time Sync Information	SystemAlmServerSta...	Alarm Server State Change	Interface Ev...	Advanced	Logged on	admin
2022/2/23	16:22:15.694	No Time Sync Information	SystemAlmServerSta...	Alarm Server State Change	Advanced	SystemAlmServerStateChange - Alarm cleared	admin	
2022/2/23	16:22:15.218	No Time Sync Information	SystemAlmServerSta...	Alarm Server State Change	Advanced	SystemAlmServerStateChange - Alarm raised	admin	
2022/2/22	16:06:16.906	No Time Sync Information	SystemAlmServerSta...	Alarm Server State Change	Event	System	Server c1_AlarmServer1 changed state from "Starting" to "Main"	ABC
2022/2/22	16:06:15.568	No Time Sync Information	SystemAlmServerSta...	Alarm Server State Change	Event	System	Server c1_AlarmServer1 changed state from "Main" to "Shutdown"	ABC
2022/2/22	15:48:50.488	No Time Sync Information	SystemAlmServerSta...	Alarm Server State Change	Event	Interface Ev...	Logged off	ABC
2022/2/22	15:48:24.252	No Time Sync Information	SystemAlmServerSta...	Alarm Server State Change	Event	Advanced	Logged on	ABC
2022/2/22	15:48:23.862	No Time Sync Information	SystemAlmServerSta...	Alarm Server State Change	Event	Advanced	SystemAlmServerStateChange - Alarm cleared	ABC
2022/2/22	15:48:17.417	No Time Sync Information	SystemAlmServerSta...	Alarm Server State Change	Event	System	SystemAlmServerStateChange - Alarm raised	ABC
2022/2/22	15:45:56.034	No Time Sync Information	SystemAlmServerSta...	Alarm Server State Change	Event	System	Server c1_AlarmServer1 changed state from "Starting" to "Main"	ABC
2022/2/22	15:26:41.812	No Time Sync Information	SystemAlmServerSta...	Alarm Server State Change	Event	Advanced	Server c1_AlarmServer1 changed state from "Main" to "Shutdown"	ABC
2022/2/22	15:26:14.671	No Time Sync Information	SystemAlmServerSta...	Alarm Server State Change	Event	Advanced	Logged on	user
2022/2/22	15:26:13.770	No Time Sync Information	SystemAlmServerSta...	Alarm Server State Change	Event	Advanced	SystemAlmServerStateChange - Alarm cleared	user