Some/IP Service Implementation

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GITHUB LINK AND DOCUMENTATION: https://github.com/kacper97/SomeIp\_ConnectedCar

1. Adding a method that resets the fault.

Added a new system variable FaultType

I changed the gui TPM.xvp to include a button for resetting the fault

***SERVER:***

**RESET:::::**

Created a peg\_2 eventgroup to handle reset

Created reset\_b and adding field with reset notification id, psi,reset getter and reset setter

Adding field to event group peg2 reset b

I have a some ip method that takes in psi,33 and onsomeipresetfieldrequest.

OnSomeIpReset Request

Retrieves the method parameter

Sets the Faults type to be 0

Commits a reset\_b field

***DANGER ::::***  
added an event handle Dan for danger zone

Added reset\_ b field handle for reset error

Created Danger\_pressure\_event with 0x8003 value

Created Reset notification id with 0x8033 val

Have a reset setter and resitter id of values 33/34

Created dan a new event that has to do with danger zone, it takes a service instance, a danger pressure event and on prepare event 2 is run. Added danger field to an event group.

Have a sysvar danger limit that triggers dan , the event handle

OnPrepareEvent2 wirtes out the danger tyre pressure.

It then inserts the danger limit value into a data buffer and sets the data to be sent to the sub2.

***Sub2***

***Reset::***

Have reset Fault Code as global method call handle, along with a reset fault code setter.

Have a resetsetter id of value 33

Have a resetgetter id value with ID 34.

Have a resetfaultcode which is a someimcreatemethodcall with a method id value of 39 and uses a onMethodResponse.

Created a someIpSetData that takes in the resetfault code with an el count(payload) and the payload.

OnResetNotificaition gets the retured parameter value and @Dash:fault =data[0];

I add a someIpCreateField Consumer with fields csi , resetNotifcationId, ResetSetterId, ResetGetterId, and method onResetNotification

Have a sysvar update button handler when the setfaultcode ( i.e. Reset Fault code is pressed). In the method I have danger subscribed to it as it will be used later on. When the button is presed, someIpSetData, resetFaultCodeSetter, 2, dataBuffer

And then I call the setter method SomeIpCallMethod(resetFaultCodeSetter)

***DANGER ::::***

I have a pre field which is a pressure danger zone

Have dan a danger zone consumed event handle

I have a danger event consumer for the danger limit that takes in service instance, id of 0x8003 and calls the callbackevent2

Then I have a method callbackevent2, whch gets the retured parameter value for the danger limit.

On some ip data -  
The method above is responsible for getting the even that a button g has been pressed and it sets the danger dsp to be the data receivedand a write to the console is added to make sure it displays correctly.  
  
  
The method below is there just to print out something to the write window. I have no implementations added in this method and the method is responsible for just printing it out. No getters or setters added in this part   
The image below shows the on start method implication for the sub2 block. I initialize the payload value to be the same of the payload that has been set above in the variables. I open an application endpoint to be the receiver.  
I create a service instance with a service number 0x305f. In the start I also have a resetFaultCode, which creates a method call and calls the method response call. This method is then added to the service. I then have a method called someipsetdata. This method takes in the resetFaultCode method, it takes the elcount of payload and the payload itself. I then create an event consumer for the danger limit, that is added to the csi service, it has a 0x8003 number and it calls the callback event group 2.  
I have a getter called gmcGetter, This is a field and is responsible for holding the value of the pressure unit . It is a some ip method call, which takes in the consumed service, it has a fieldgetter I'd and it calls an onfieldgetterresponse.  
I've a getter called DanZoneGetter. It is a some ip method call which takes in the consumed service, a danZoneGetterid and it calls a method called OnZoneGetterFesponse.  
I've a gmCsetter which is a some ip create method call, which takes in a consumed service, it had a field setter id and it calls an onfieldsetterresponse.   
DanGetter is responsible for getting the current value of the danger limit set by the server. It takes in a csi,  consumed service a DanGetter value and it calls a method called onDanFieldGetter response.  
ResetFault code setter is calling a someipmethod call with a resetsetterid and a method called onfieldreset response. This is used to get if the button called reset has been pressed by the client.  
Thesetdangerlimitlow is the method responsible for the dangerlimitsetter when a user presses the button 4 on the keyboard. It takes in an I'd of setdangerlimitlowID and a method called onDanfortyresponse Thesetdangerlimithigh is the method responsible for the dangerlimitsetter when a user presses the button 5 on the keyboard. It takes in an I'd of setdangerlimithighID and a method called onDanfiftyresponse  
Dangermc is a someipcreatemethodcall, it takes in the csi, the number 12 as setter  and it calls ondangerresponse method.  
  
SomeIpsetData method takes in the dangermc, elcount payload and the payload itself. Then I call the checkforsomeipdata.  
I then create an event group called ceg I add csi and is 1 to the event group  
Cev is a event consumer which takes an Id 0x8001 and a callbackevent1  
  
Then I've a method called someipsetproperty  
Which takes csi, multithreshold and 2 or more subscribers   
  
  
  
  
....  
Callbackevent1 takes in a cevhandle and a message handle.  
It has a res dword value which is the return parameter  
It has a chat data value of index 1  
Then it gets the data, payload and it checks for some ip error   
It writes out the tyre pressure event with the current tyre pressure  
It sets the pressure dsp to be of that data value.  
  
...  
I've a method called On resetNotifcation that takes in the pfhandle and message handle. It has a res dword value which is the return parameter  
It has a chat data value of index 1.  
It writes out weather the resetNotifcation had been received with the current value  
  
Set fault code on sysvarupdate is responsible for the reset of fault code button. When pressed it calls a method called someipsetdata with the resetfaultcodesetter is value and then call the value  
Dangerzone is a setter and it receives the danger zone limit and sets the current value   
  I've a generic method to check for some ip errors that occur . It writes out the Byte value of the error. ..

I've a method called on dangerdaangerresponse which is triggered when the g button is pressed. It has a variable to store the current value. Res holds the value of the message response. It then writes out the current value to the write window for the dash. I let the variables to be the data that's is received.