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Lab 6 Q’s

1. Why might an auto-approval rule for subscriptions be considered insecure?
   1. As long as somebody gets the correct role names, my children picos will auto-accept any subscription which will give the other party full access to the events and functions in my pico. This could be an easy entrance into the system.
2. Can you put a sensor pico in more than one sensor management pico (i.e. can it have subscriptions to more than one sensor management pico)?
   1. Yes! You would have to have multiple events that can be called at the same time so that you could send both events to the sensor managers. Or you could chain the events and have them sent one at a time.
3. Imagine I have sensor types besides temperature sensors (e.g. pressure, humidity, air quality, etc.). How would you properly manage collections of sensors that include heterogeneous sensor types?
   1. I would have different sensor managers that each manage their types of sensors. This way, each sensor will report to its manager which could then report to the overseeing manager. Another option is to have a single manager but have differing events that it is watching for. All of the humidity sensors call a humidity threshold violation event etc… You would also need to distinguish with roles when the subscription is called.
4. Describe how you'd use the techniques from this lesson to create collections of temperature sensors in particular rooms or areas of a building. For example, I would still have the sensor management pico, but might have collections for each floor in a building.
   1. You would have to have separate managers. One manager for each floor or thermostat. Each sensor could report to a thermostat that would identify the sensor with the wellKnown\_Tx that is used, and then send an event to that AC unit in that room. Each collection would refer to a thermostat in this case and each collection manager would report to the main building manager pico.
5. Can a sensor pico belong to more than one collection? After the modifications of this lab, if a sensor belonged to more than one collection and had a threshold violation, what would happen?
   1. I would say yes. I would think that a sensor could report to multiple sensor managers (collections). If a threshold violation happened, the sensor would have to send two separate events to each collection manager and you could have problems with the two managers talking. I would say it is possible but you would have to be careful how you handle multiple events.
6. When you moved threshold violation notifications from the sensor to the management ruleset, did you add the rules to an existing ruleset or create a new one? Why?
   1. I added the rules to the existing ruleset because it was intuitive to me. I would make sense to create other rulesets. Rather than copy the code and change it a little, I was able to use my sdk and Lab 1 modules. I installed them in my sensor management pico and used the functions to send a text through twillio.
7. When you moved threshold violation notifications from the sensor to the management ruleset, did you add only one rule or more than one rule to achieve this end? Which rules did you add and why (i.e. justify the architectural decisions did you made)?
   1. I really only copy and pasted the rules that were in the original pico modules and slightly changed them. Work smarter than harder. The only rule I added was a rule to accept the event coming from the child pico via the subscription. This then passed the information on to the other rules that I brought over from the original sensor modules to handle the violations. It made it much easier than I expected and the code was written so I could copy and paste it well.