A Universal Platform for Building Energy Management

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Outline

1. Objectives
2. Changes to Plan
3. Details on New Device
4. Implementing Motor Scheduling
5. Plans

Objectives

- Narrow down idea for new device
- Implement scheduling feature for motor in BEMOSS

Changes to Plan

- Abandoned plan to integrate stepper motor (little to no application)
- Decided on new device - Sensibo Sky

Figure: Sensibo Sky, courtesy of PCMag.com

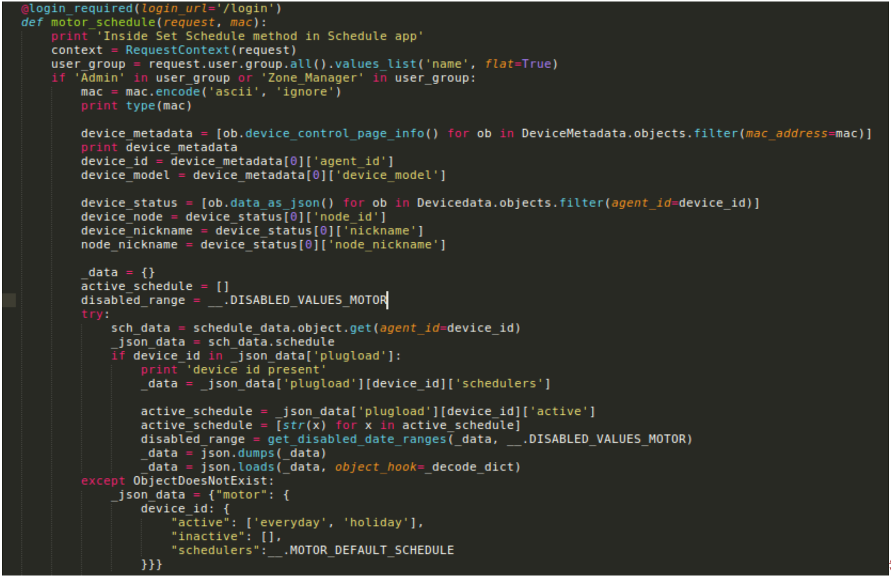
Details on New Device

- Sensibo Sky - Smart air conditioner controller
- Connects to any AC unit through IR remote
- Compatible with IFTTT, Amazon Alexa, Amazon Echo, Google Home
- Capable of measuring temperature, humidity, battery voltage of air conditioner
- Set fan speed, temperature, swing mode, temperature unit (F, C) of air conditioner
- Open API - `https://github.com/kdschlosser/Sensibo_Sky_API.git`

Implementing Motor Scheduling

- Added view function `motor_schedule` in `webapps.schedule.views.py`
- Copied from view function `plugload_schedule` in same file

Implementing Motor Scheduling



```
@login_required(login_url='/login')
def motor_schedule(request, mac):
    print 'Inside Set Schedule method in Schedule app'
    context = RequestContext(request)
    user_group = request.user.group.all().values_list('name', flat=True)
    if 'Admin' in user_group or 'Zone_Manager' in user_group:
        mac = mac.encode('ascii', 'ignore')
        print type(mac)

        device_metadata = [ob.device_control_page_info() for ob in DeviceMetadata.objects.filter(mac_address=mac)]
        print device_metadata
        device_id = device_metadata[0]['agent_id']
        device_model = device_metadata[0]['device_model']

        device_status = [ob.data_as_json() for ob in Devicedata.objects.filter(agent_id=device_id)]
        device_node = device_status[0]['node_id']
        device_nickname = device_status[0]['nickname']
        node_nickname = device_status[0]['node_nickname']

        _data = {}
        active_schedule = []
        disabled_range = __.DISABLED_VALUES_MOTOR
        try:
            sch_data = schedule_data.object.get(agent_id=device_id)
            _json_data = sch_data.schedule
            if device_id in _json_data['plugload']:
                print 'device id present'
                _data = _json_data['plugload'][device_id]['schedulers']

                active_schedule = _json_data['plugload'][device_id]['active']
                active_schedule = [str(x) for x in active_schedule]
                disabled_range = get_disabled_date_ranges(_data, __.DISABLED_VALUES_MOTOR)
                _data = json.dumps(_data)
                _data = json.loads(_data, object_hook=_decode_dict)
        except ObjectDoesNotExist:
            _json_data = {"motor": {
                device_id: {
                    "active": ['everyday', 'holiday'],
                    "inactive": [],
                    "schedulers":__.MOTOR_DEFAULT_SCHEDULE
                }}}
```

Implementing Motor Scheduling

- Exception thrown at line 3 of `motor_schedule`
- ’User’ object has no attribute ’group’
- Code:

  ```
  user_group =
  request.user.group.all().values_list(’name’, flat=True)
  ```

Plans

- Fix issue with scheduling
- Start integrating Sensibo Sky

Any questions?

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