

Hacking the Bear

In class today we will work with the Bear.

You will need:

- A machine that is running Python 3.6. (Earlier versions of Python 3 will almost certainly work, but haven't been tested.)
- The `git` command line program.
- Your Twilio phone number.
- The `bear-secrets.txt` file.

1. Setup

- 1) Clone <https://github.com/olinlibrary/bear-as-a-service>.
- 2) In a terminal window, `cd` to the `bear-as-a-service` directory.
- 3) Copy `bear-secrets.txt` into this directory.
- 4) Edit `bear-secrets.txt`: replace `+16175551010` by your phone number. It must be in exactly this format, including the initial `+1`. (This is the **E.164** standard for international phone numbers.)
- 4) Linux, macOS: execute `source bear-secrets.txt`. Windows: execute `setx NAME value` for each `export NAME=value` in `bear-secrets.txt`.
- 5) Install Python packages: `pip3 install -r requirements.txt`

2. Sending an SMS Message

Send yourself (or a classmate) a text message: `python3 scripts/send_sms_message.py +16175551010`. Replace `+16175551010` by your cell phone number — *not* your Twilio phone number.

This tests your Twilio credentials and your Python and Twilio package installation.

3. Directing the Bear

Send a message to the bear: `python3 scripts/send_mqtt_message.py "forget about your worries"`

This tests your RabbitMQ (message broker) credentials and your `paho-mqtt` (RabbitMQ client) package installation.

4. Running an SMS→Bear Gateway

Run a service that relays messages that are sent to your Twilio phone number, to the bear:

`python3 examples/sms_bear_gateway.py`. Now send a text from your mobile phone to your Twilio phone number. Watch your terminal, and listen to the bear.

This tests your personal incoming SMS message queue.

You are encouraged to review the source code for this example.

5. Remix

Now you've got some pieces — SMS→Python; Python→SMS; Python→Bear+SMS — and an example that assembles these into SMS→(stuff happens)→Bear.

Think about what else can you do with this — change what happens in the [stuff happens] box; send SMS messages to different places; listen to or activate more features of the physical or electronic environment.

On Monday, we will pick up with where we left off.