DP Presentation — Evaluation Ideas
6.033 2018

For your presentations, we've asked you to give a brief discussion of how you intend to evaluate your design. The feedback you got from your instructor on your DPPR likely points out a few items that your team will need to evaluate. To round out that discussion, below are some others that you should be considering.

Your presentation does <u>not</u> need to include an actual evaluation. This document, and the presentation itself, are meant to aid you in planning your evaluation (among other things). You'll execute that evaluation on your final report.

- **What is the communication overhead of your system?**

  Typically this will be a measure of the amount of traffic sent between smart devices and the FCS.

- **On average, how long does it take between when a smart device comes online and when it is capable of sending data to the FCS?**

  That is, how long does it take for a smart device to be discovered and for there to be a route between it and the FCS?

- **On average, how long does it take data collected by a smart device to be transmitted to the FCS?**

- **How much data are you storing on the FCS? How long will it take before the FCS can't store any additional data?**

- **What parts of your system limit scale, and what are those limits?**

  Could your system handle the addition of 5000 new thermostats and motion detectors? Could it handle 500 new cameras? Could it handle additional buildings that MIT might construct? Etc.

- **How long does it take your system to respond to a gateway failure? To a BLE+ Repeater failure (if you used such repeaters)?**

- **How long does it take for a software update to be delivered to all smart devices of a certain type?**

  This will likely be a function of the size of the update.

You might also think about how your system could be extended to do *more* than what we've required. For example, could your system handle the following upgrades?

- Facilities decides to support two additional types of smart devices.

- Facilities increases their minimum requirement for video cameras from delivering one frame per second to delivering three frames per second.

- At the start of crisis mode for a particular camera, Facilities wants to have access to the last minute of data from that camera in addition to the current data.