What is IoT

“The Internet of Things (IoT) is a system of interrelated computing devices, mechanical and digital machines, objects, animals or people that are provided with unique identifiers and the ability to transfer data over a network without requiring human-to-human or human-to-computer interaction.”
The Internet of Things is actually a pretty simple concept, it means taking all the things in the world and connecting them to the internet.

Calum McClelland
IoT Platforms

Secure Encrypted Connection

Reliable Network

Speed

4G
Where does it report to
What Does it Report

- Controller Temperature
- Compressor Speed
- Super Heat
- Sub Cooling
- Discharge Temperature
- Electrical Characteristics
- Ambient Temperature
- High Side Pressure
- Low Side Pressure
- Suction Temperature
- Discharge Temperature
- BTUH
- Fan Speed
What Does it Mean:

- Is the control board failing
- Is there enough capacity
- Is there enough indoor air flow
- Is there enough refrigerant
- Is the condenser clean
- Is the voltage in an acceptable range
- Is there too much refrigerant
- Is there too little refrigerant
- Did the load decrease
- Is the condenser clean
- Is there enough capacity
- Is the load decreasing
Why Does it Matter

Optimum Operation: Adjusts system to obtain maximum efficiency

Load Matching: Adjusts system to meet the heating and cooling demand

Interoperability: Allowing unrelated components to work together
How do we Benefit

Utility Demand Response Program: Allows utilities to control system output

Predictive Fault Analysis: Allows the system to determine when a fault is imminent

Sustainability: Insurers the integrity of the system over it’s intended life span
Conclusion

**Efficiency**

**Reliability**

**Maintainability**

![Chart showing SEER vs. Cooling Cost Savings](chart.png)