

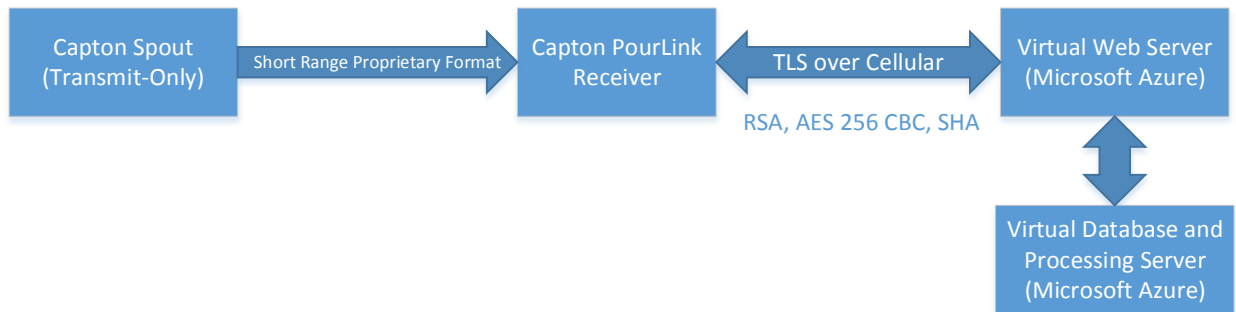
Capton PourLink Receiver Security

Executive Summary

The primary security precaution used by the Capton PourLink receiver is also the most fundamental – sensitive information is never transmitted. The receiver is never connected to the client’s networks, and only transmits basic spout information that is later processed into reports by Capton’s virtual Azure servers. Furthermore, the connection between the receiver and the Azure server is authenticated and encrypted using TLS.

Data Flow

Data flow from spout to server is shown below.



Capton Spouts:

Capton spouts are transmit-only, and can't be re-programmed. They transmit simple raw information such as the spout serial number, and data that is later processed into a pour amount by the central server. They do not transmit any sensitive information such as brands, costs, etc. They transmit to the receiver with a low-frequency short-range radio using a proprietary format. The spouts can't be read by Bluetooth or WiFi receivers.

Capton PourLink Receivers:

The Capton PourLink receivers add timestamps to the spout data, attach a receiver identification number to the data, and then transmit to the central web server using a secure TLS connection. The TLS connection is actually made through a cellular network with an on-board cellular modem, and is never associated with any of the client's on-site networks.

The TLS connection uses RSA for key exchange and authentication, AES 256 CBC for encryption, and SHA for data integrity.

No sensitive information is ever transmitted. The receiver has no access to any sensitive client information. The only information ever transmitted is basic material such as spout and receiver serial numbers, raw data that is later processed into pour amounts, and basic spout and receiver health data such as battery charge level and whether the receiver is plugged in.

Capton Servers:

The spout and receiver data is received, stored, and processed into client reports by the Microsoft Azure virtual servers.