Transportation Digital Transformation



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Why change? Why Now?



IoT Device Availability

- Long lasting cheap batteries
- Relatively inexpensive device cost



Platforms, libraries and more....

- Open source community busting down the door to collaboration
- More and more platforms and tools to support digital transformation



4G-5G Wireless Networks

- Ultra fast, Ultra reliable networks
- Ability to provide dedicated IoT networks with ultra low latency

Chicago Transit & IoT

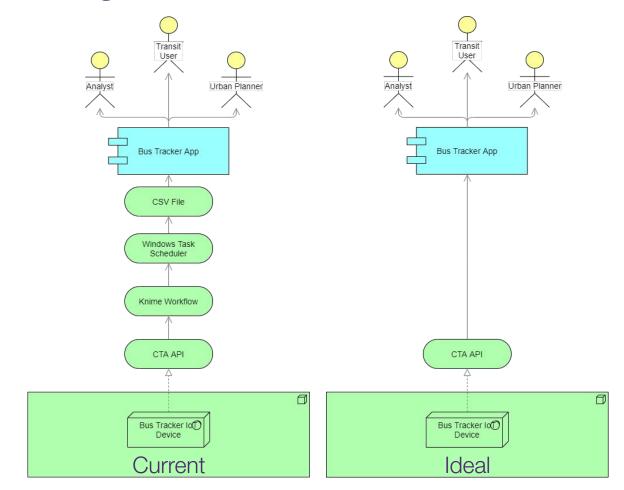
Opportunity

- Like many cities around the world, Chicago has exposed API access to some of their city data
- They installed IoT devices on their city buses and provide location + metadata.

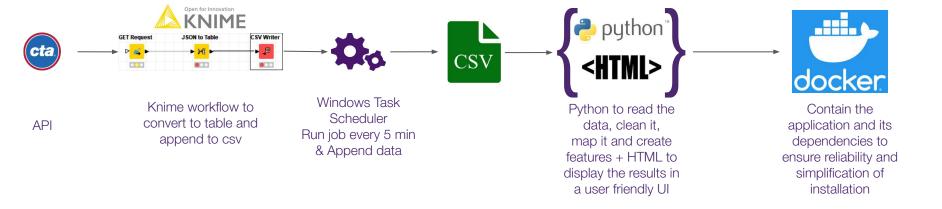
Concept

• The idea was to consume their API's, perform some ETL, add some features and visualize a sample of what can be done with this data.

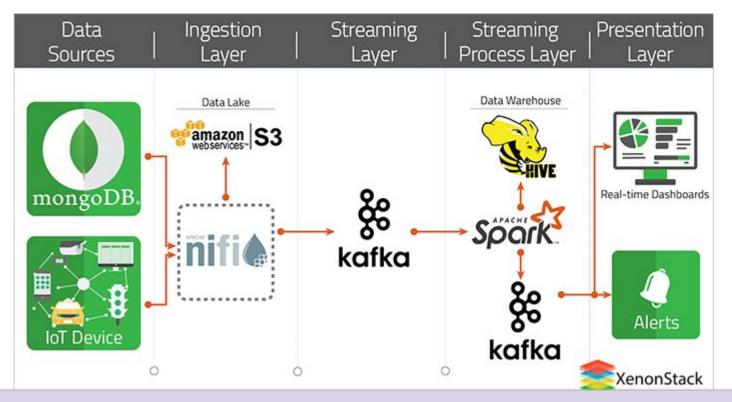
Data Flow Diagram



Design Architecture Diagram - Current



Design Architecture Diagram - Ideal



Much more involved setup however provides scalability and stability

How to run the app!



Clone Repository

• Git clone https://github.com/mikeditri/bustracker.git



Build the Docker Image & run it

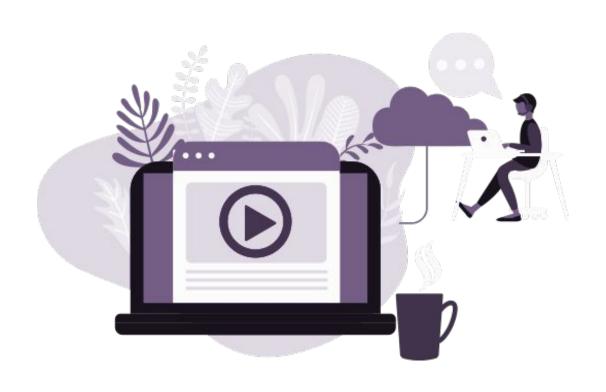
- docker build . -t bustracker
- winpty docker run -it -p 5000:5000 --rm bustracker (nb winpty used on windows machines only)



Open in browser

Open browser and navigate to http://localhost:5000/

Code Demo

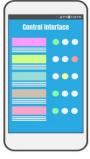


5G & IoT



Critical need for network densification, new spectrum, wireless and core network innovation





5G network fuels IoT which in turn fuels big data









etwork Technology