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Real Time Graph Modelling of the London Bus Network

The Data

- London Open Transport API
- Real-time bus arrivals at every stop
- 130,000 data points a minute
- Also provided:
  - Real-time traffic incidents
  - Real-time road closures

Transport
for London

The Plan

01

Build a real time graph model of the London bus network

02

Combine with road incidents

03

Track how incidents affect bus flows

04

Visualise this bus flow – highlight problem areas

05

Predict impact of new incidents

The Set Up

- Amazon EC2 Instance – London
  - Distribute across multiple micro instances
- Node.js server to communicate with TfL
- Apache Storm for stream processing
- D3.js for visualisation
- Node.js for web interface server

Progress

Amazon EC2 instances set up

TfL EC2 IP whitelisted

Zookeeper, Storm installed

Currently setting up Node.js to send and process data streaming requests to TfL