

# Weighting Past on the Geo-aware

## State Deployment Problem



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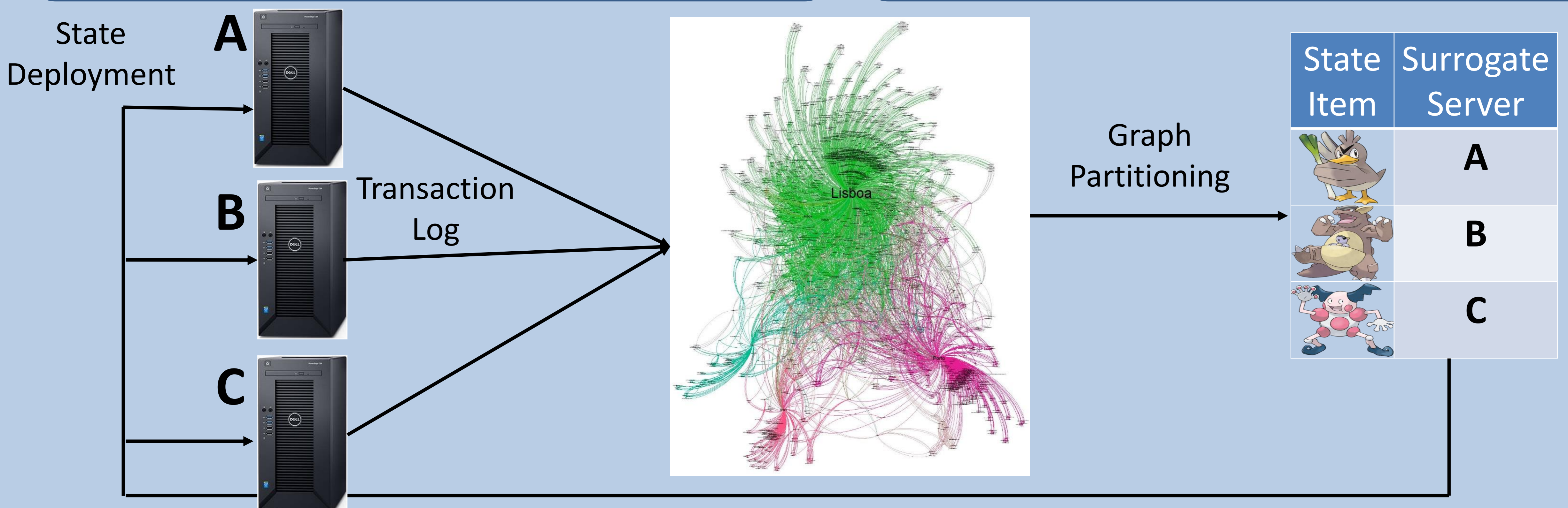
### Large Scale Mobile Applications are in the Cloud

- Concurrently connect a large number of users that retrieve, publish and manipulate significant amounts of application state.
- Current trend: concentrate consistency and concurrency control in a supporting infrastructure hosted in the Cloud.

**Problem:** Application performance is hampered by the resulting latency and jitter!

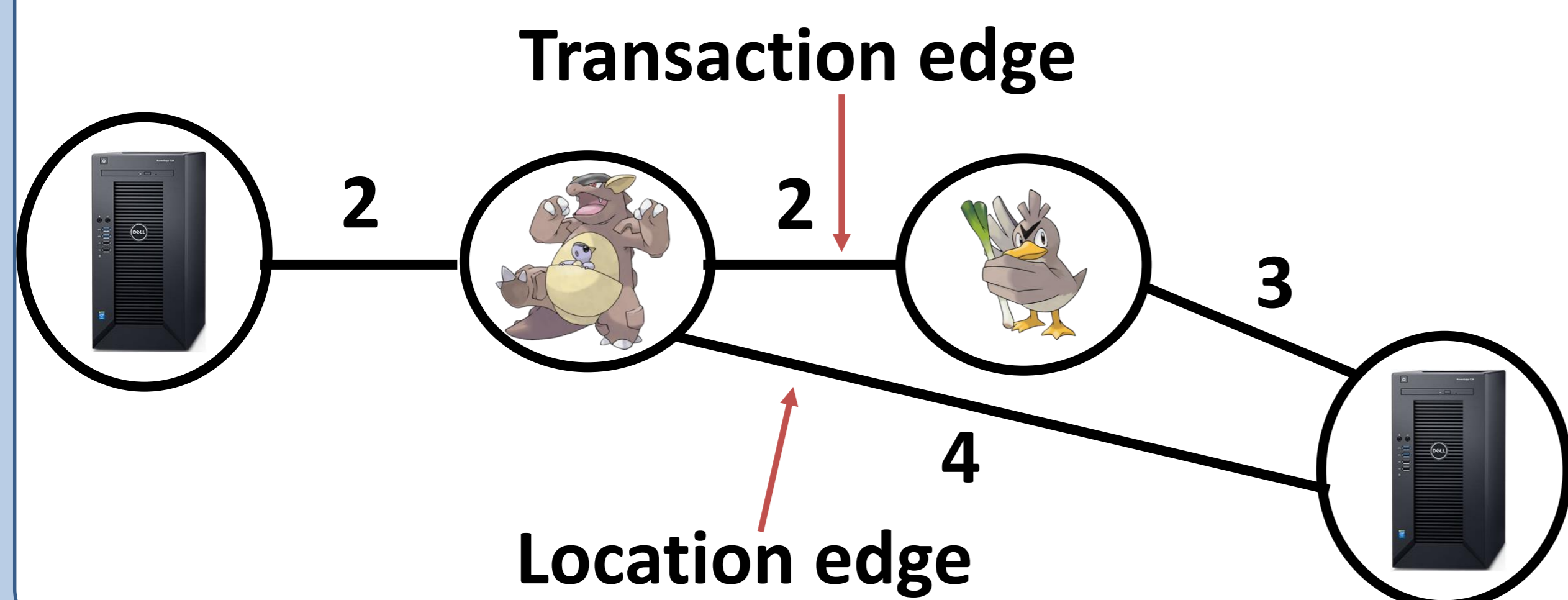
### Geographically-aware State Deployment Problem

- Fog Computing deploys surrogate servers at the network edge.
- Approximating servers and end users.
- **However, benefits depend on correctly deploy each component of application state at its most convenient location.**



### Graph partitioning to geo-aware state deployment

- Application state items and surrogate locations mapped to vertexes:
- Two sort of weighted edges:



### We propose historical data to enrich this algorithm

- **Preserve current Location [PL]** to artificially increase edge weight
- **Memory Eviction [ME]** prune graph of unused state items in the previous evaluation period
- **Hybrid [Hy]** puts together best of both approaches. **Hy** only uses state items accessed in the previous evaluation and increases the edge weights.