DYNAMOS:
Dynamically Adaptive Microservice
OS

A Middleware for data-exchange systems

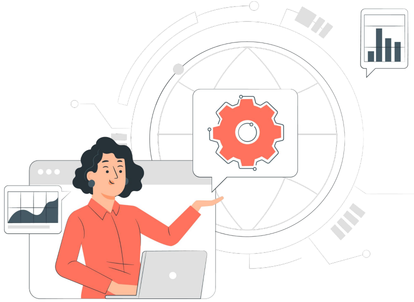
Create dynamic data exchange scenarios

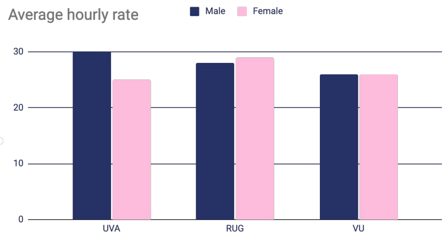
Using a set of core data exchange microservices

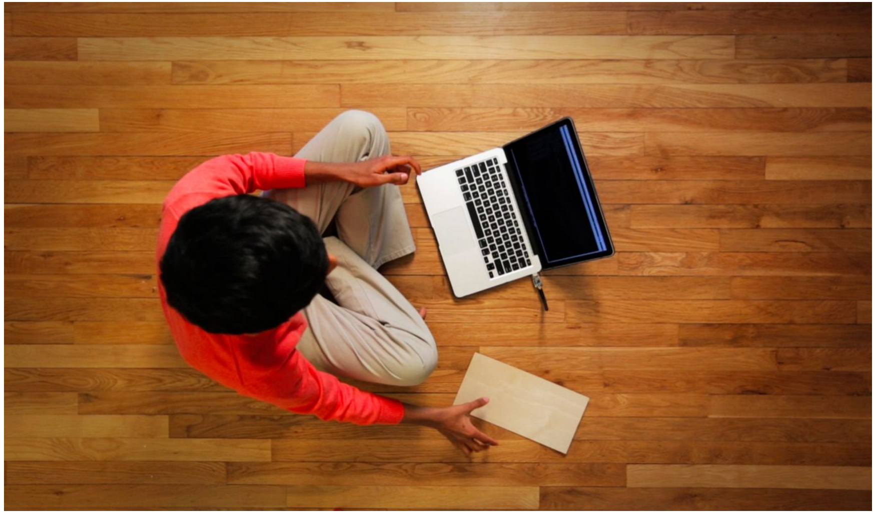
- In a distributed data marketplace
- Compose different service patterns per request
- Dynamically adapt data-exchange patterns
- Checked against legal policy

DYNAMOS offers

1. Single use ephemeral jobs
2. Data is passed from one service to another using a predefined interface
3. Self-adaptivity through MAPE-K feedback loops







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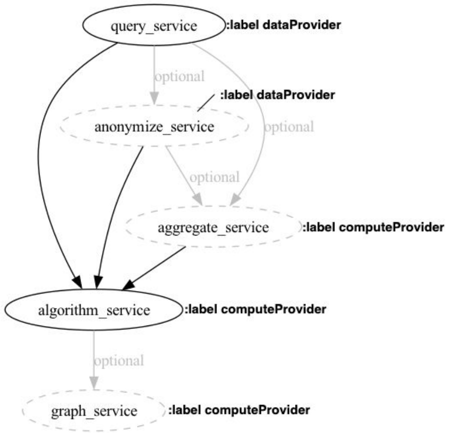
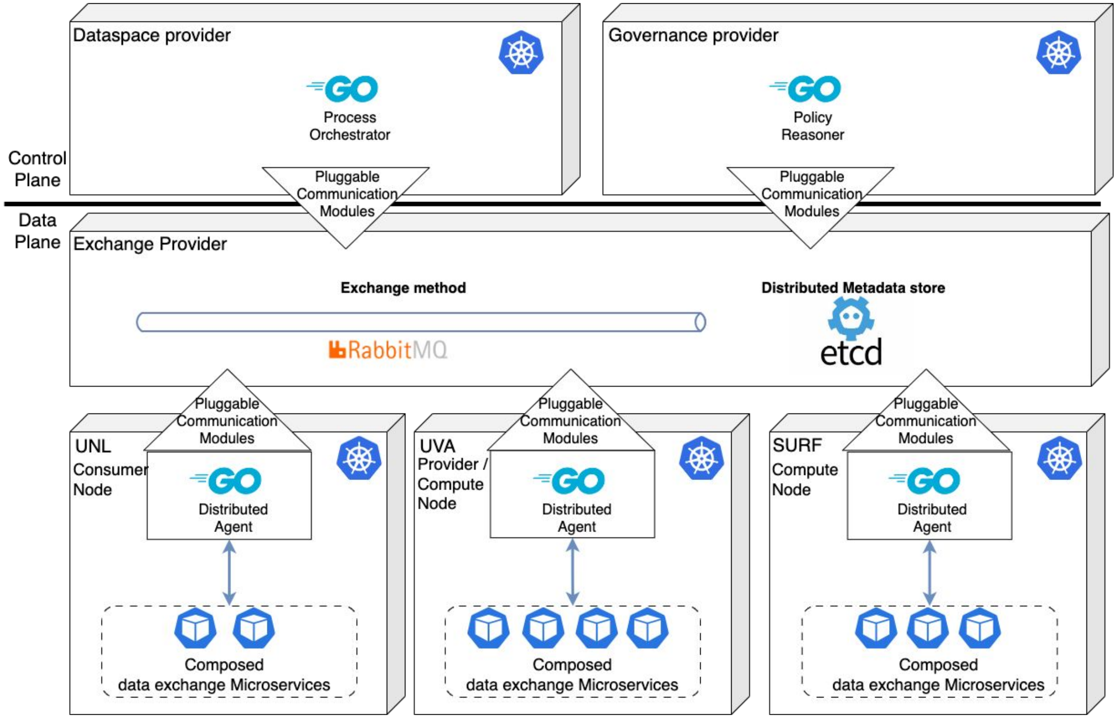
How it works





1. Generate microservice chain → 2. Check policy and additional requirements → 3. Create ephemeral data-exchange job

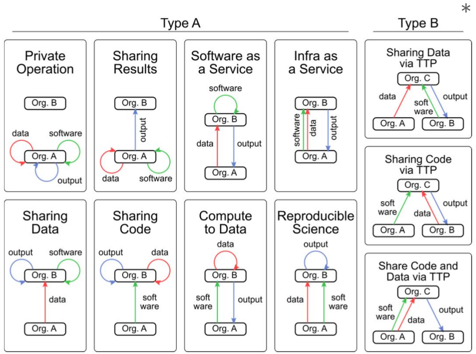
Future use and research

- Experiment with different data exchange archetypes
- Testing Optimization and Self-Adaptive Algorithms
- Experiment with security and networking components
- Link data from Fabric into DYNAMOS

How to use

1.
Install or clone DYNAMOS profile

2.
Clone DYNAMOS



3.
Start experiments

* Shakeri, S., Veen, L.E., & Grosso, P. (2020). Evaluation of Container Overlays for Secure Data Sharing. 2020 IEEE 45th LCN Symposium on Emerging Topics in Networking (LCN Symposium), 99-108.