

Neuropil – cyber security mesh

GOALS



 Cyber Security Mesh

Messaging protocol for Industry IoT

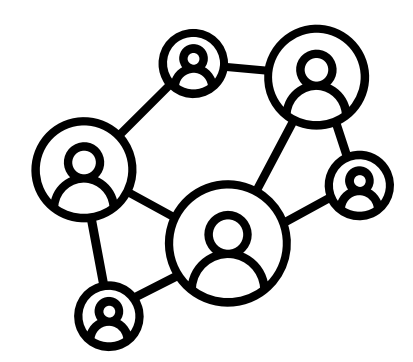
Neuropil is a cyber security mesh designed for IoT.

- Establish secure e2e connection among all devices
- Real data management
- A growing software with an open-source base

CHALLENGES



 Real-time handling



 Network scaling



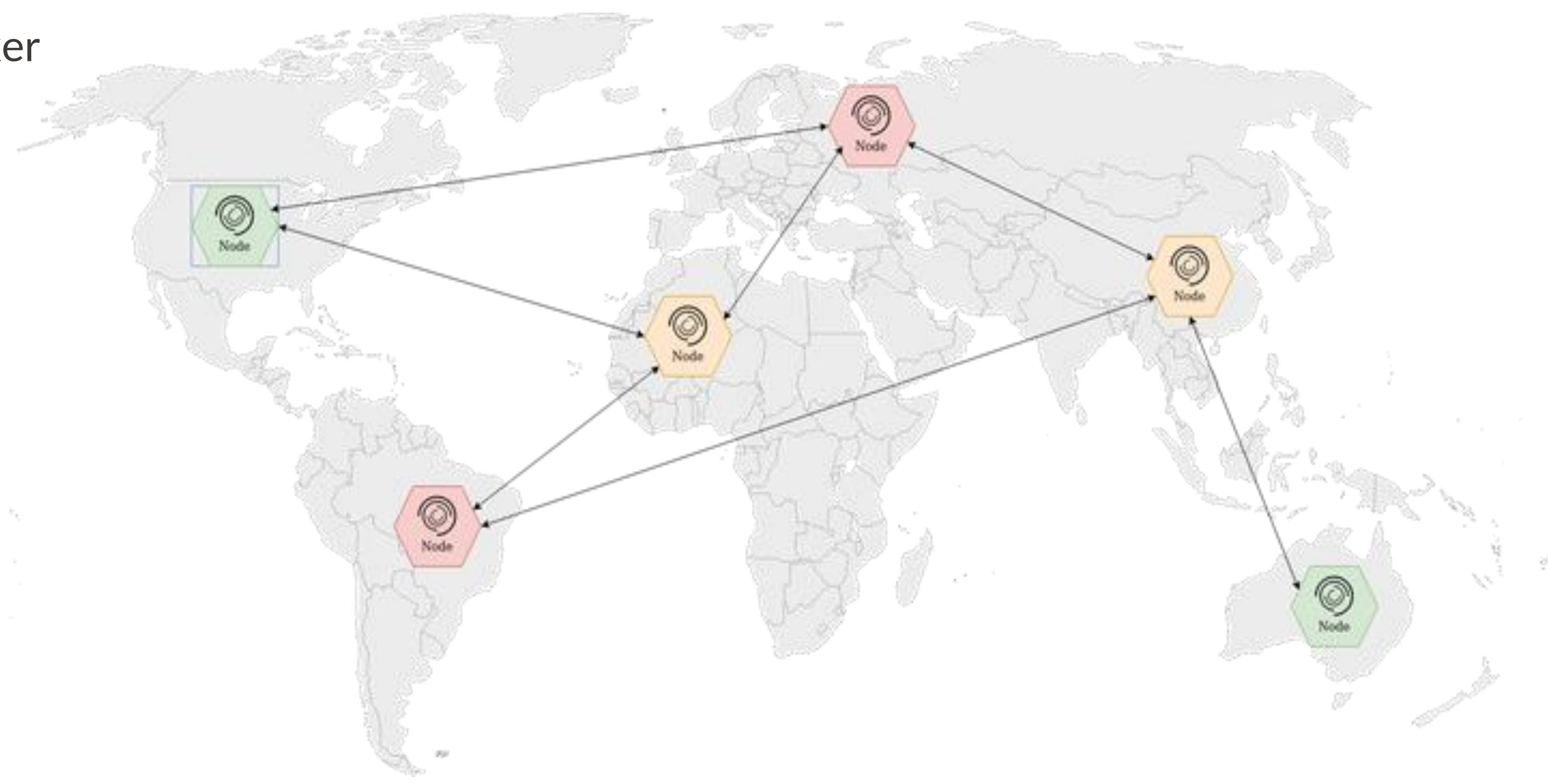
 Global network connectivity

DEMO SETUP

Experiment application deployed via docker container and kubernetes and worldwide distributed nodes.

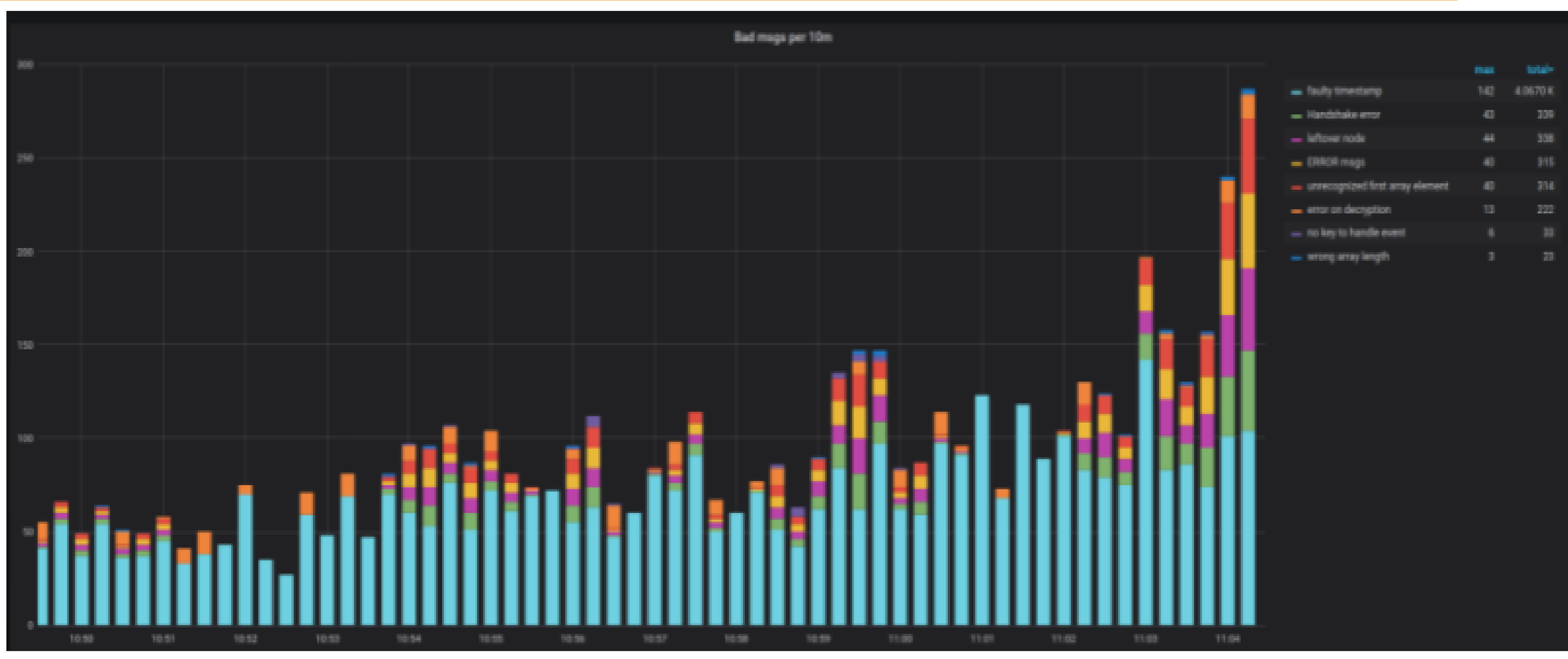
Tech-Stack:

- Python
- Grafana
- LOKI
- Neuropil
- Docker
- Kubernetes



MORE RESULTS

1. We have successfully fixed most of our bugs in our software
2. Improved network stability
3. Optimized memory management
4. Successfully scaled up to 2000 nodes
5. Unified tooling
6. Proven stability



CONCLUSIONS

1. Bloomfilter enhancements
2. Network stability enhancements
3. Concurrency issues fixed

POST MORTEM

1. Better accessibility for users
2. Improved set-up process
3. NGI Funding
4. Neuropil as a Service
5. Selfsustaining network
6. Global message system for IoT Devices
7. Smart Contracts