

# Evolution einer Microservice Architektur zu Autonomic Computing

Hauptseminar „Autonomic Computing“

**Was sind Microservices?**

# Monolith



# Microservices



# Kohärenz



# NETFLIX

- 42,5 Milliarden Streamingstunden (2015)
- Tausende Microservices (2015)
- Zehntausende VMs (2015)
- Verantwortlich für 1/3 des Downloadtraffics in NA (2015)
- 500 Entwickler (2010)

# Unabhängige Skalierung



# Teamunabhängigkeit





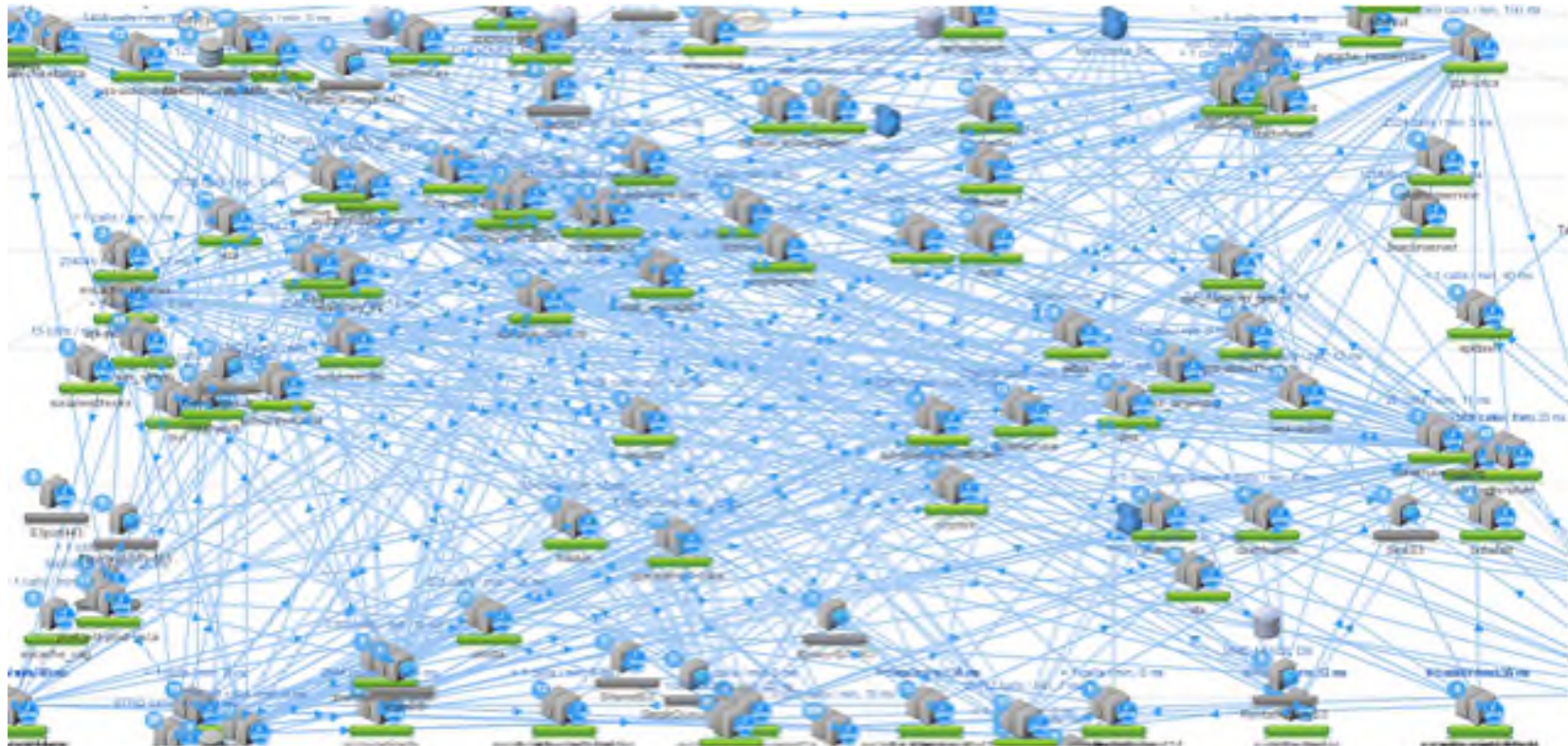
# Technologieheterogenität



# Kommunikationsoverhead

- Video

# Komplexität

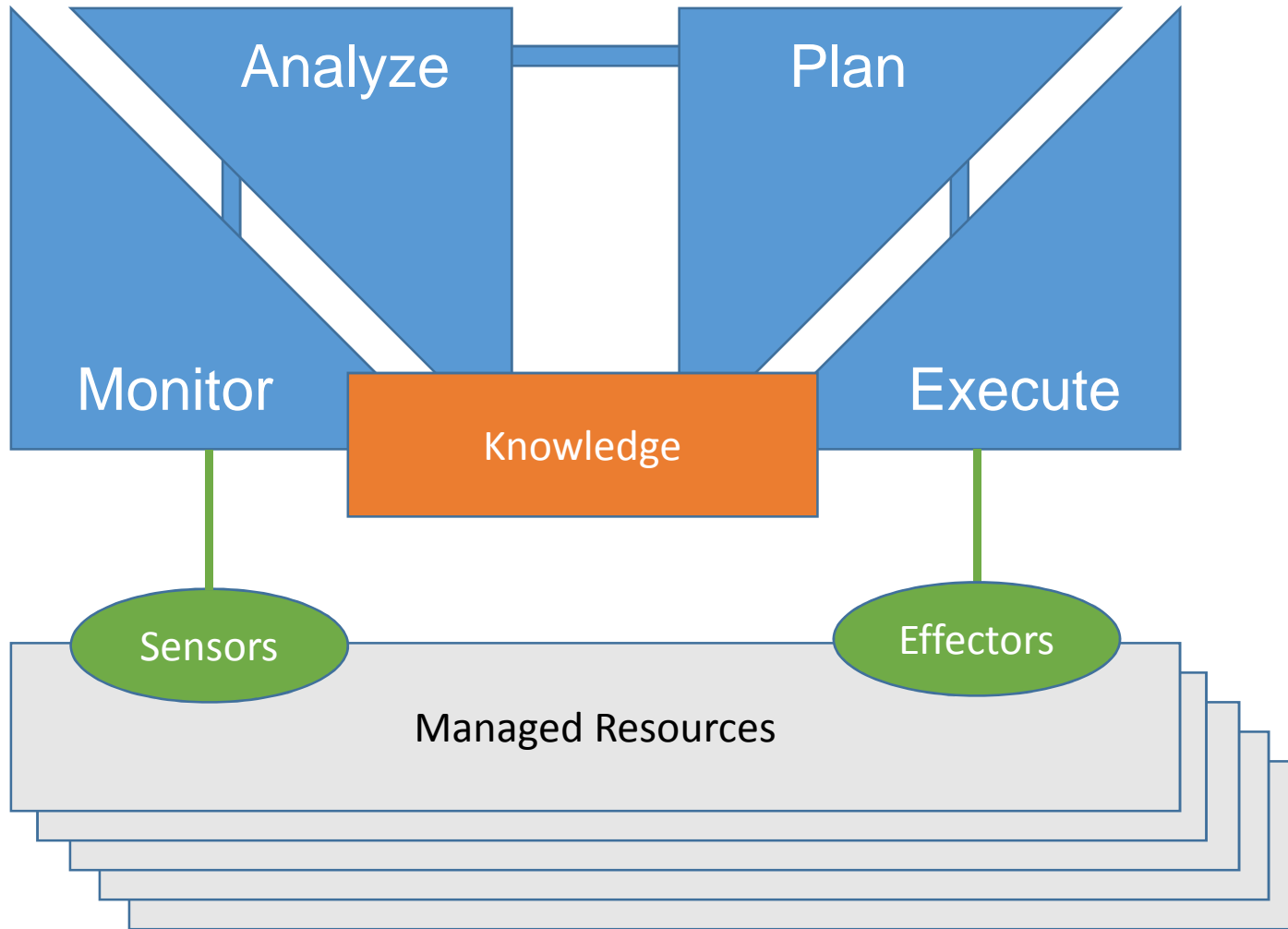


# Autonomic computing

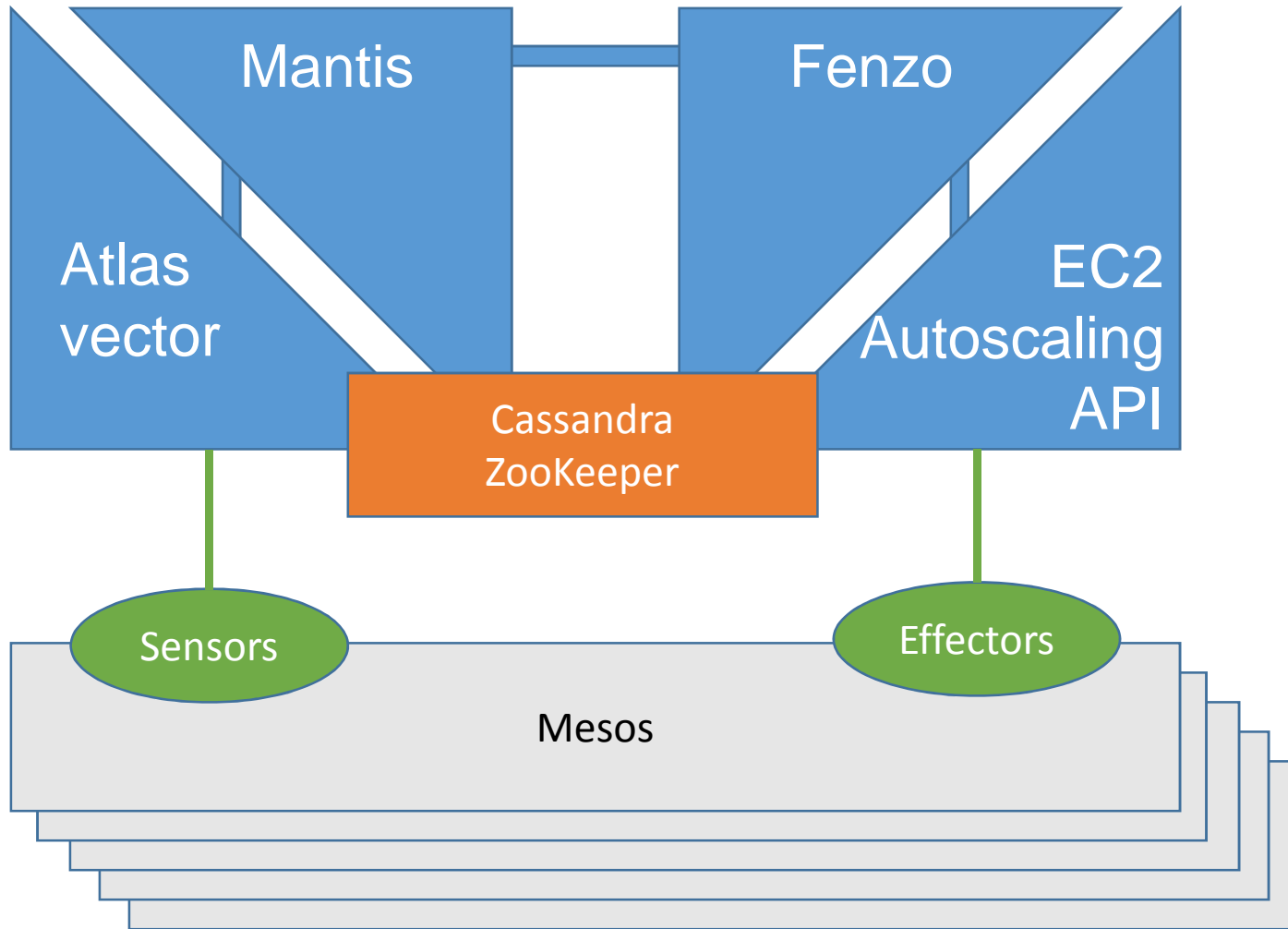


self-configuring  
self-healing  
self-optimizing  
self-protection  
self-aware

# MAPE-K



# NETFLIX



# Ausblick

- Kategorisierung nach Adoption Model
- Adaptives Monitoring
- A/B Testing
- self-optimizing mit MQuAT

# NETFLIX

It's been said that the Netflix microservices architecture is a metrics generator that occasionally streams movies.

<http://techblog.netflix.com/2016/03/stream-processing-with-mantis.html>