Critical view on cloud computing

Nils Döring, Michael Mardaus, Julian F. Rost, Sebastian Müller

#### Gain

Cloud-Owners
Cloud-Users
Governments

#### Challenges

#### Challenges

Performance

Accessa

Strategic

Modifiability

Customer-

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### Gair

Cloud-Owners
Cloud-Users

Challenges

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Accessability
Strategic
Modifiability

Modifiability
Customer-

### Structure

What you are up to

1 Gain

Cloud-Owners

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2 Challenges

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### Gains for different groups

Winner and Prices

Who is gaining and how?

#### Gair

#### Cloud-Owners

Cloud-Users

#### Challenge

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Modifiability

Customer-Relationsh

### Gains for different groups

Cloud-Owners

- Higher utilisation of the existing computing power
- Lower average costs for bigger systems
- Additional income for companies from other sectors

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Cloud-Owner

#### Cloud-Users

Governmen

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Modifiabilit

Relationsh

# Gains for different groups

Cloud-Users

- easier access to computing ressources
- "scalable" ressources

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Cloud-Owners

Governments

Governmen

Challenge

Performance Accessability

Strategic Modifiabilit

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### Gains for different groups

Governments

 means for censorship and prosecution (Youtube ans Pakistan, USA-Patriot-Act, "Great Firewall of China", BKA-"Stop-Signs") Critical view on cloud computing

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### Challenges of using clouds

Obstacles and hurdles

What are we up to, if we consider to use a cloud-service?

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Cloud-Owner Cloud-Users

Governmen

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#### Performance

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Strategic

Modifiabilit

Customer-

### Performance challenges

- varying performance in especially smaller and medium sized clouds load-changes have higer impact
- latency might cause trouble with timeouts

Accessability

# Accessability/dependence challenges

- as data and service is outsourced, connection has to be high-available
- need for outage prevention and mitigation

Government

Challenges

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Performance

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Strategic

Modifiability

Customer

### Strategic challenges

- low-cost solution vs. better or more secure solutions (aka. Finance Dept. vs. IT Dept.)
- outsourcing of know-how
- lock-in might be more expensive in the long run (raising prices)
- need for strict auditing
- more complex communication between cloud-provider and cloud-users

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Cloud-Users

Government

### Porformano

Performance Accessabilit

Modifiability

Customer-Relationshi

### Modifiability challenges

- given standardised protocols and software-versions
- monopolisation of standards
- scalability is limited by the architecture of the cloud
- long-term SLAs might slow down developement

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Governments

#### Challenge

#### Porformanco

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Customer-Relationship

# Customer-Relationship challenges

- is the company allowed to store customers data in the cloud?
- are customers expecting the data to be stored inhouse?