



Reconfigurability as a Key for new Network Services

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Integrierte Hard- und Softwaresysteme

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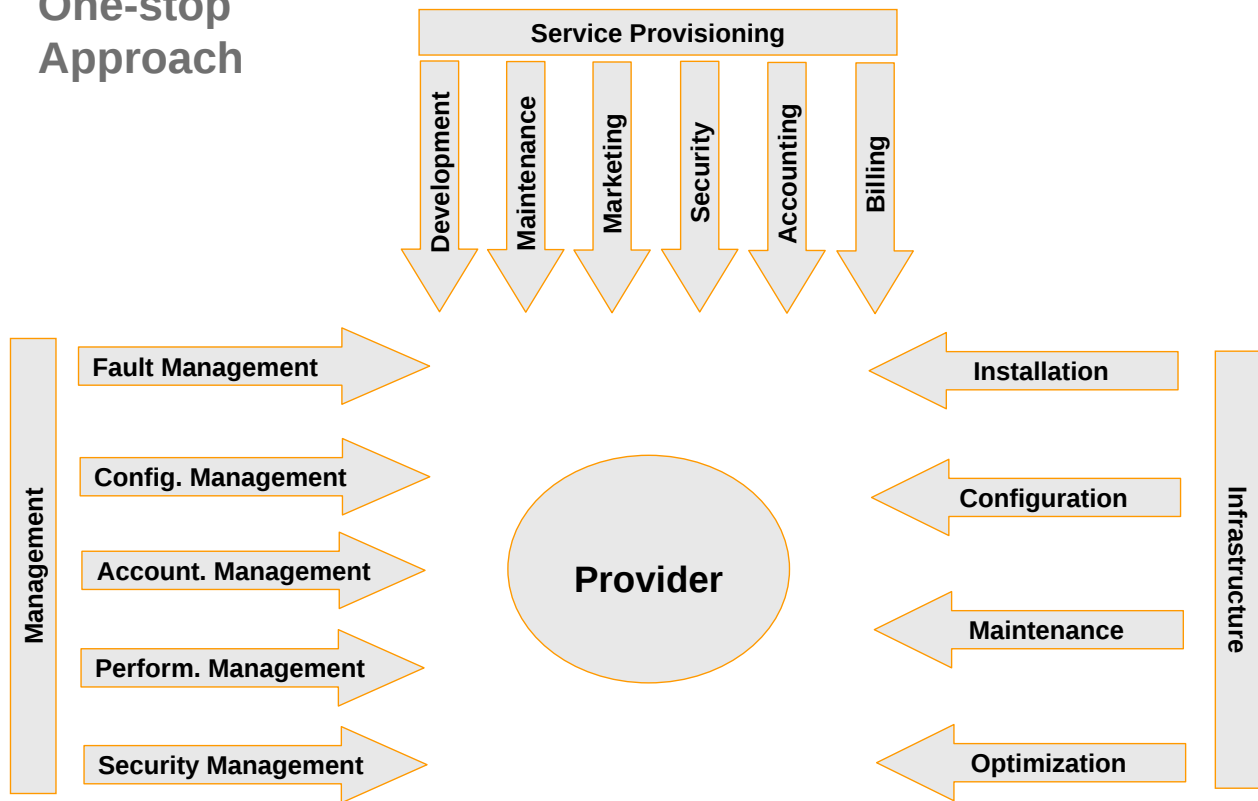


Content

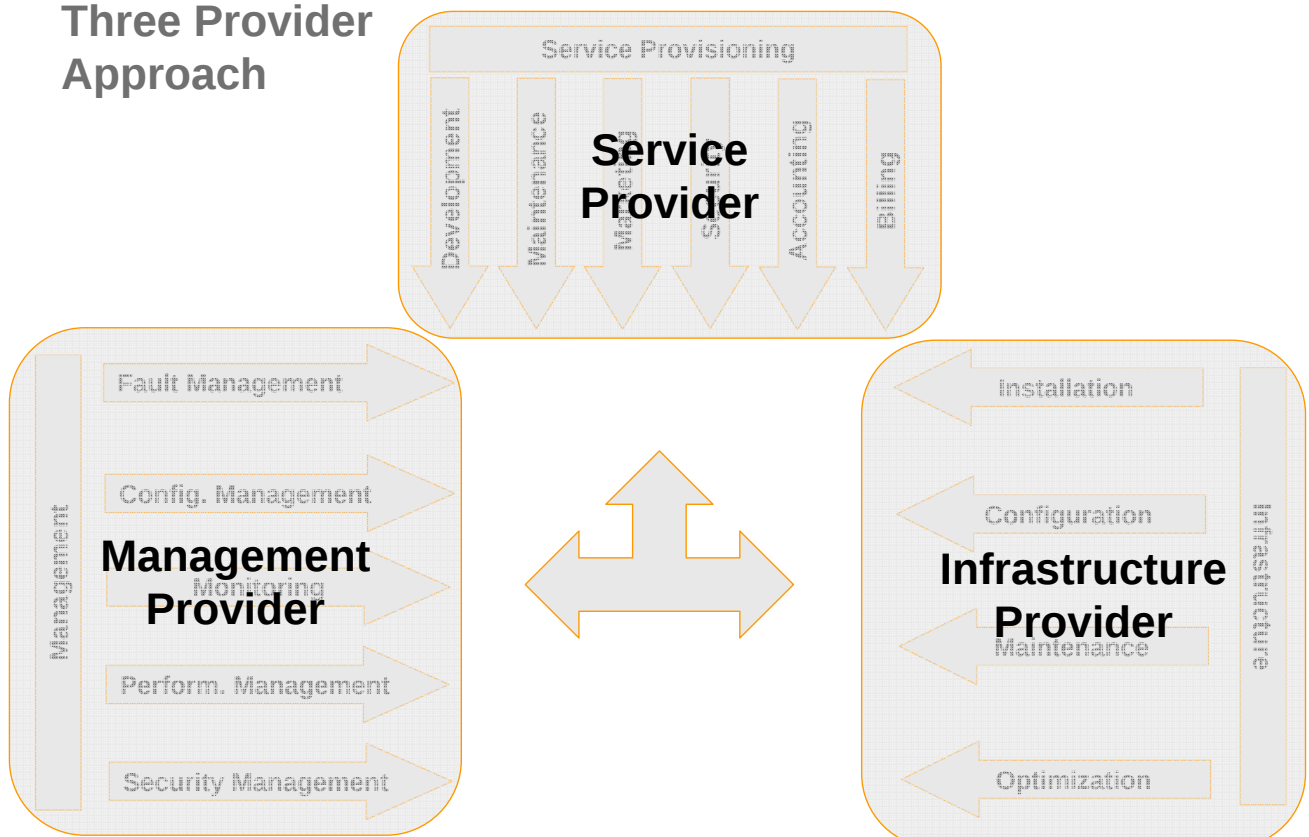
- One-stop Approach
- „Three Provider Approach“
- Example: business park
- Requirements
- Technical Solution
- Open research areas
- Conclusion



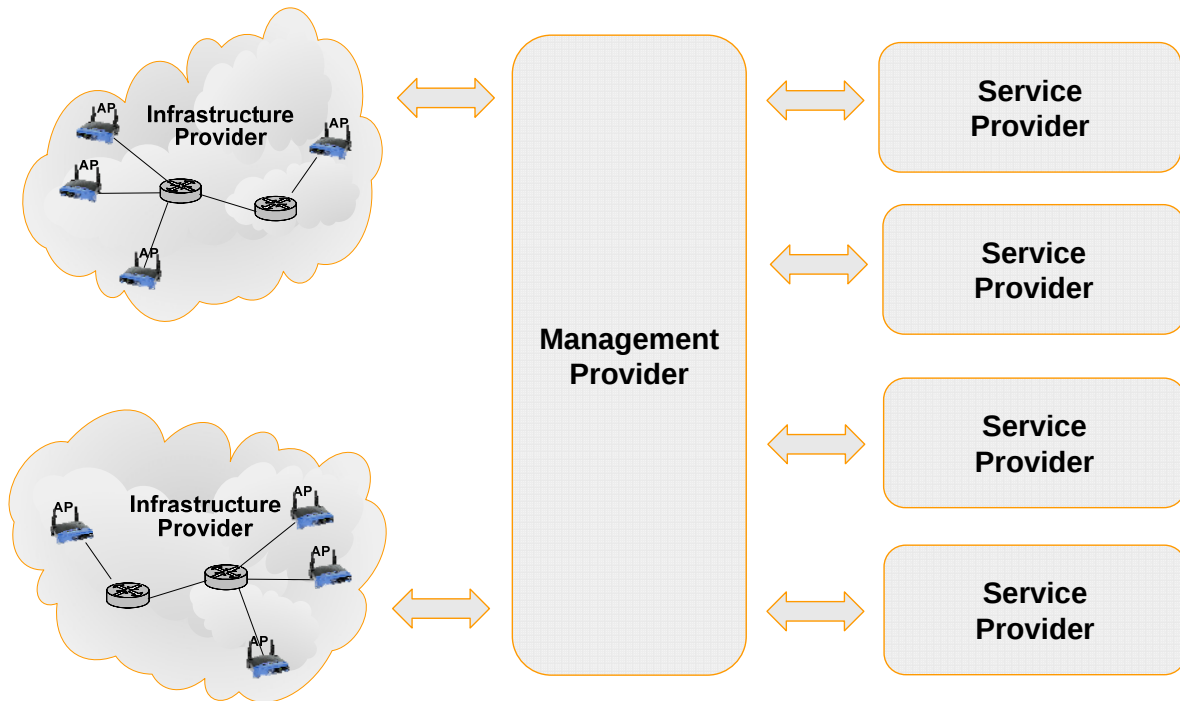
One-stop Approach



Three Provider Approach



Three Provider Approach



Example: Business Park

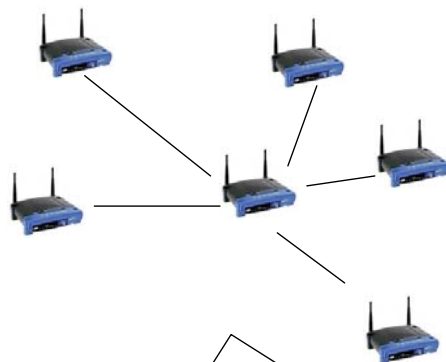


Service Provider



Service

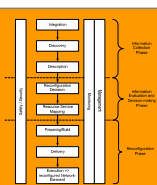
Infrastructure Provider



Infrastructure

Management Provider

- Configuration
- Management
- Connection to a public Network

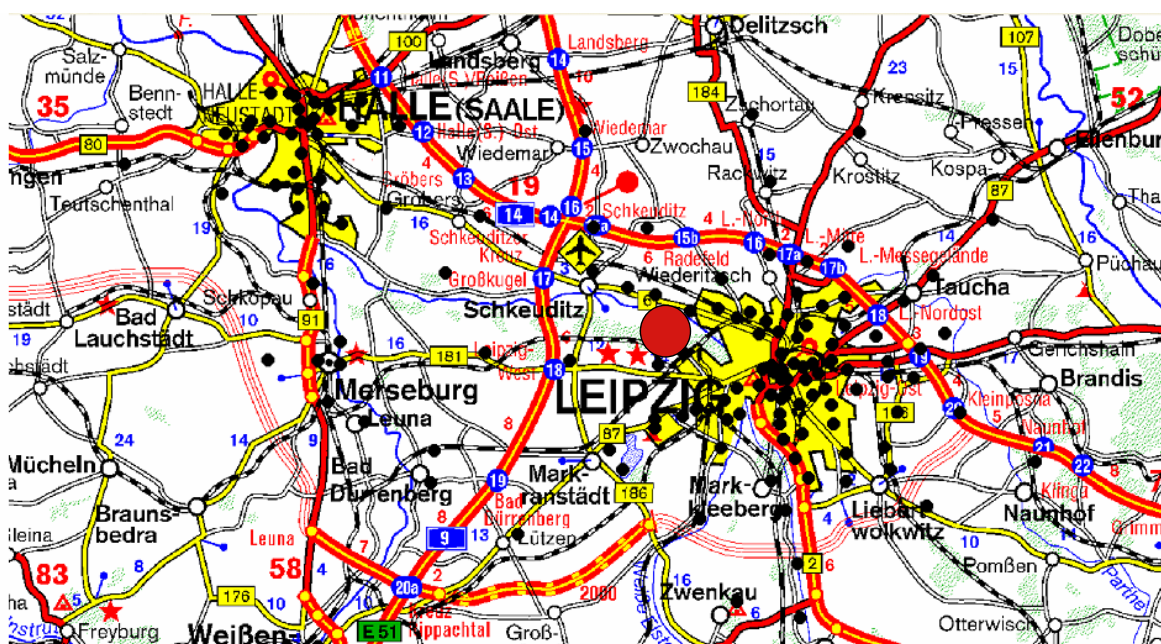


Requirements

- dynamic network architecture
- logical reconfigurability of network elements
- loosely coupling between services and network resources
- automation of management processes



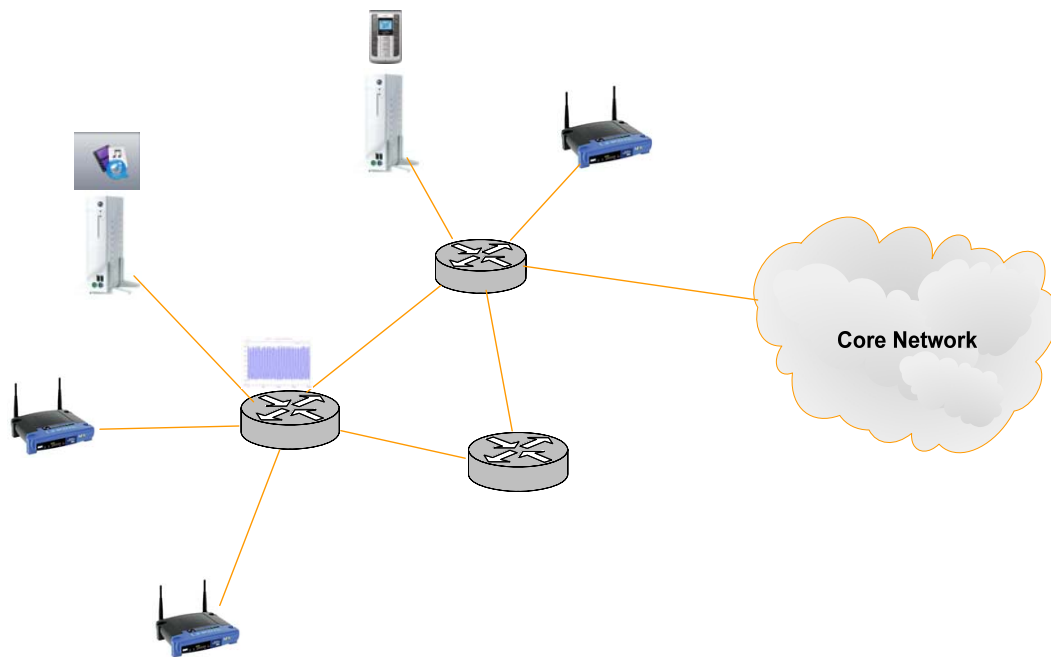
Technical Solution



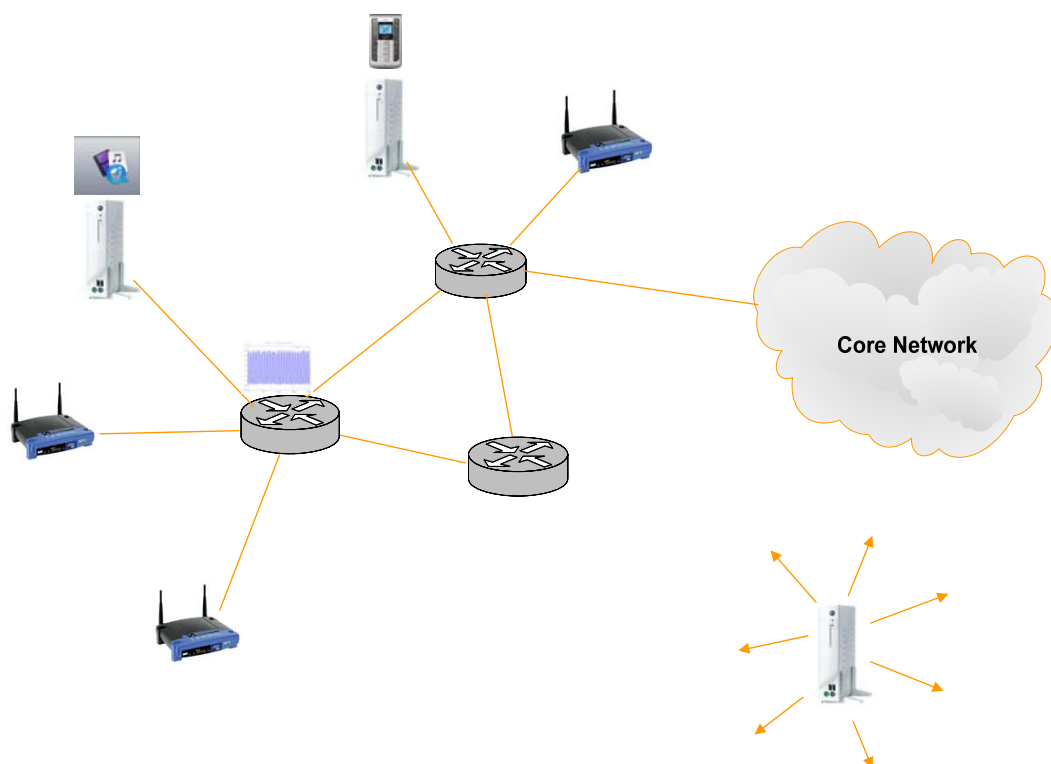
Östliche Länge: 11,8° – 12,6°

Nördliche Breite: 51,2° – 51,5°

Technical Solution

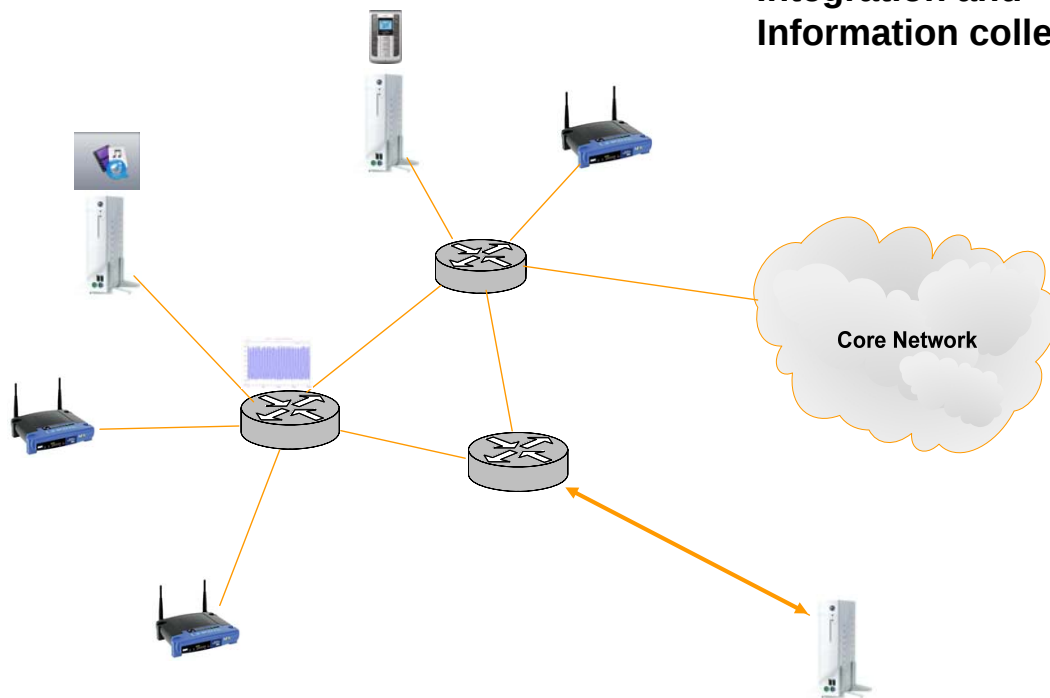


Technical Solution



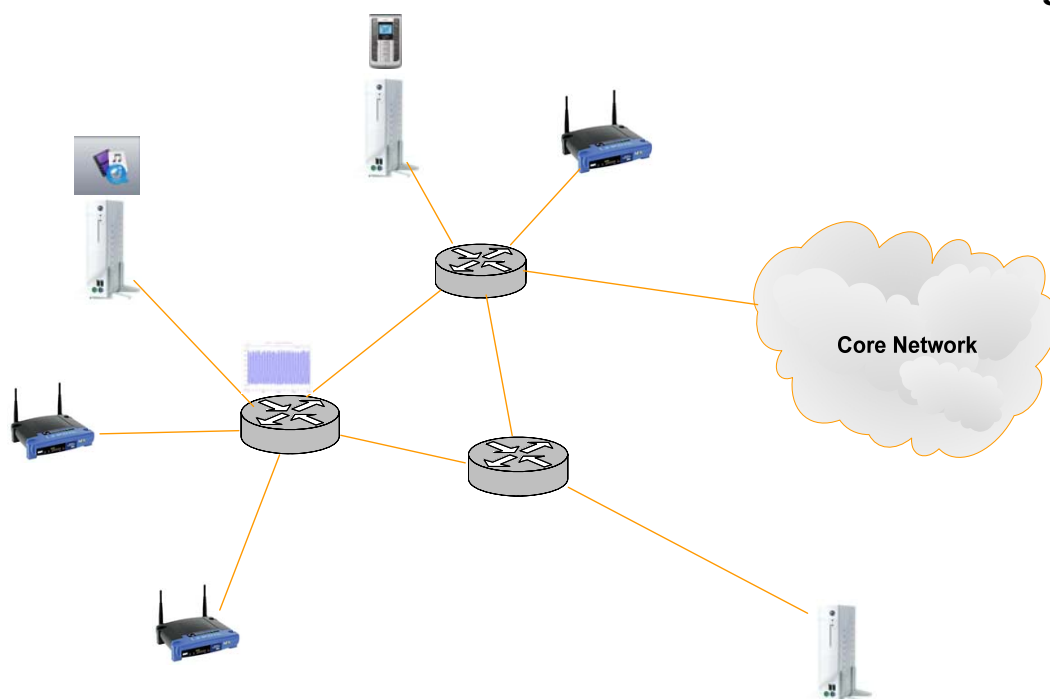
Technical Solution

- Integration and Information collection



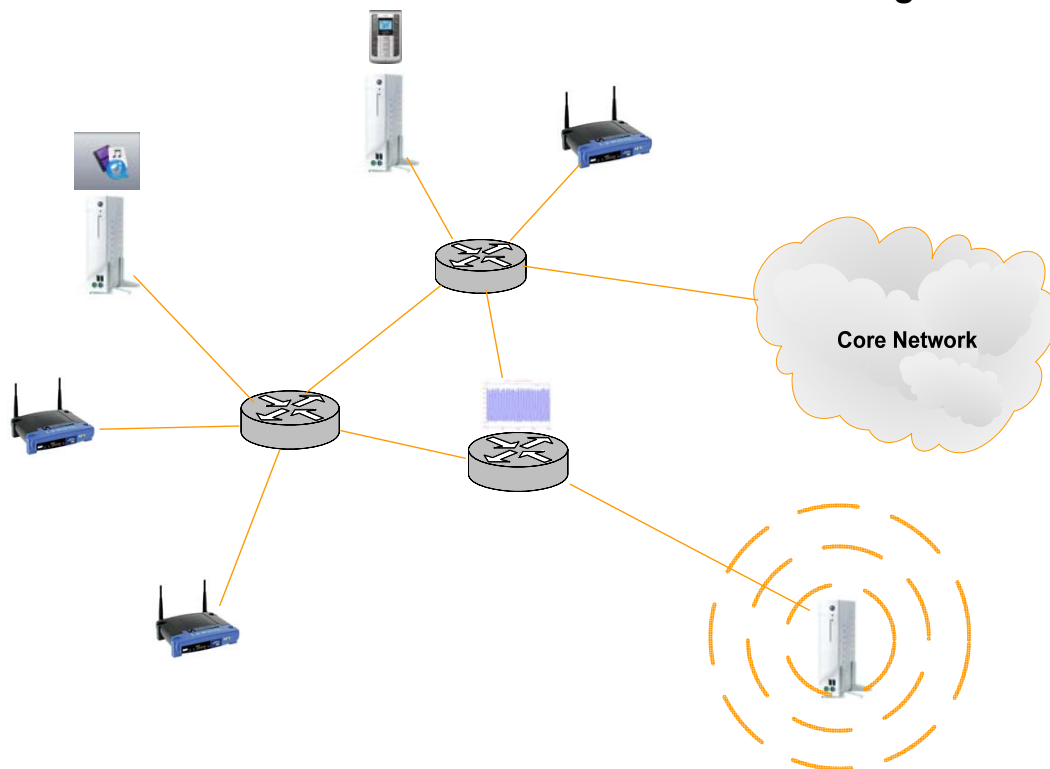
Technical Solution

- Decision-making



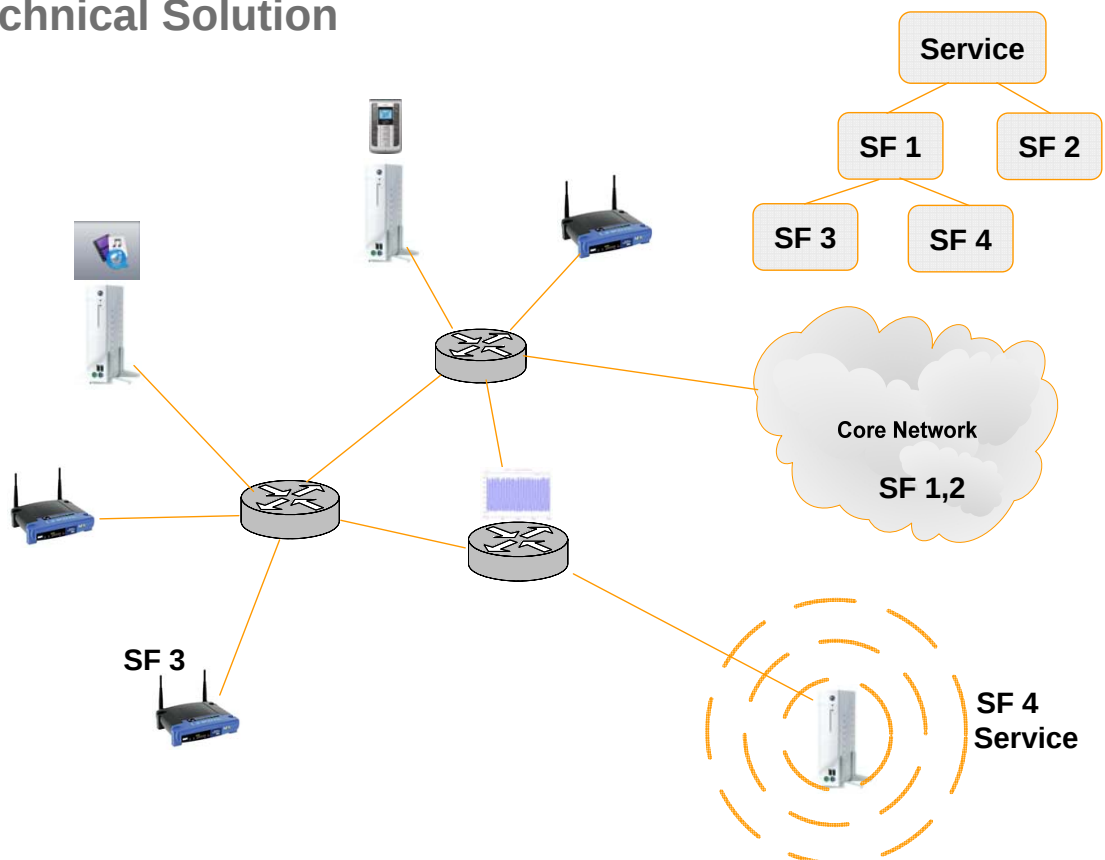
Technical Solution

• Reconfiguration



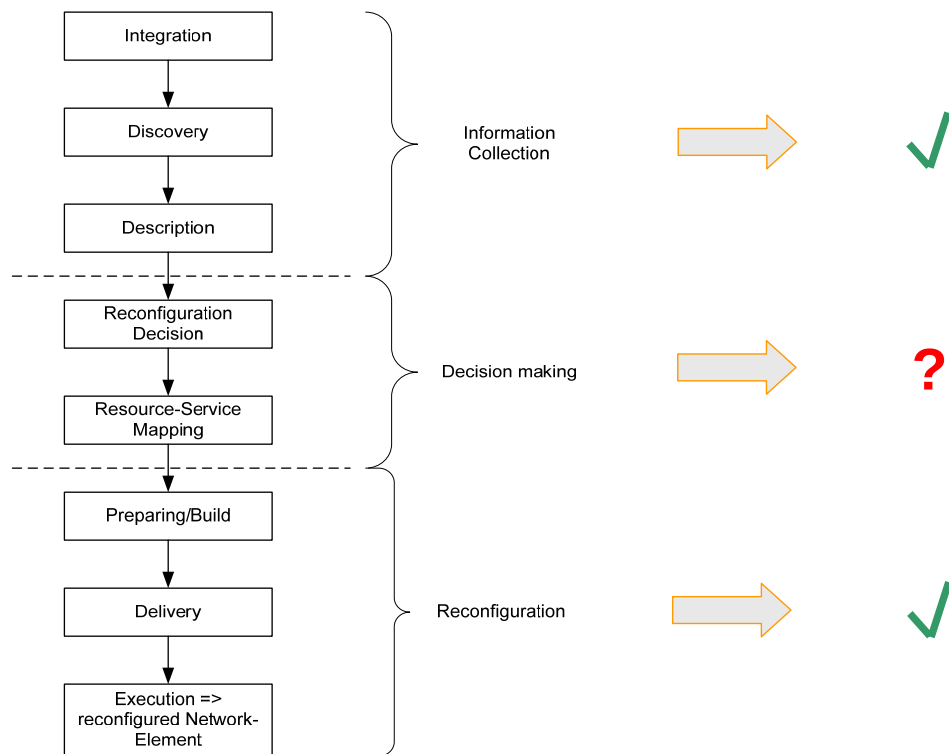
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Technical Solution



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Reconfiguration Skills



Open Research Areas

- Estimation of resource requirements
- Description of resource requirements and network element capabilities
- Decision making (smart, autonomous)
- Network architectures
- Network equipment / OS
- Stability and Robustness
- Security mechanisms

Conclusion

- Need for new management approaches
- „Three provider approach“
- Reconfiguration as technical solution
- Example of a use case
- Definition of technical requirements
- Identification of still open research areas



Thank you