

Multi-dimensional Migrations in FI Design



Current Internet

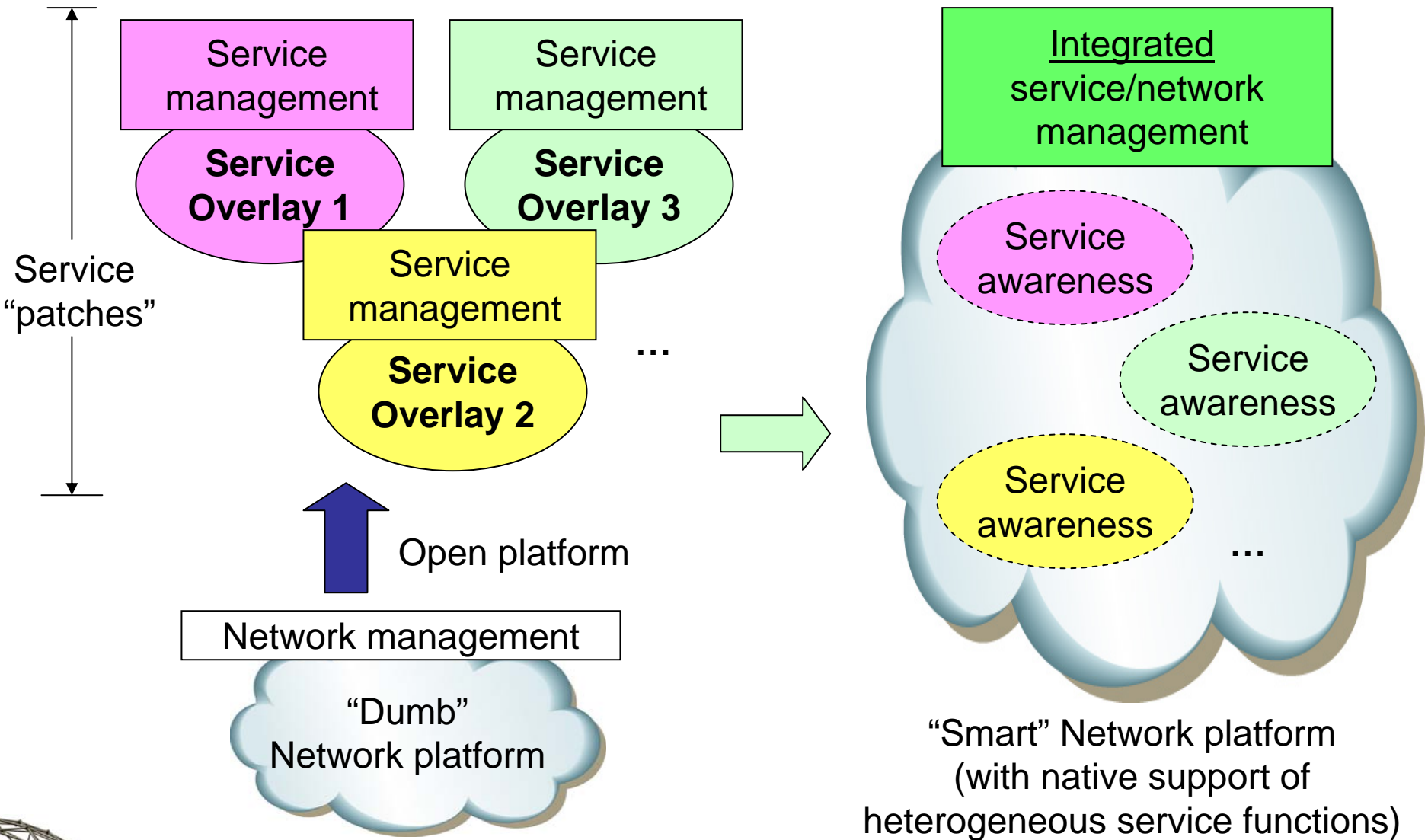
Key features

- Host-to-host communication
- Point-to-point
- Fixed
- Best effort
- Unsecured open platform
- Not systematically managed

- ✓ Location independence
- ✓ Point-to-multipoint & Multipoint-to-multipoint
- ✓ Mobility
- ✓ Guaranteed QoS
- ✓ End-to-end security
- ✓ Self-management

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Building Native Service-aware FI Paradigms



Specific Design Requirements

- **Service requirements (Customer oriented)**
 - **QoS and robustness:** Guaranteed E2E QoS + assurance (in case of network anomalies)
 - **Mobility:** Ubiquitous access to the FI-based services, seamless handover operations across network boundaries
 - **Security and trustiness:** E2E content protection across heterogeneous networks (not all parties can be trusted)
- **Operational requirements (Provider oriented)**
 - **Scalability:** To work at large scale, supporting both huge number of customers as well as wide global geographical coverage
 - **Manageability:** “Cognitiveness” and self-management capabilities
 - **Resource sharing capabilities:** Enable mutual sharing of resources between homogeneous/heterogeneous cooperating stakeholders
 - **Security:** Advanced protection functions against various DoS threats