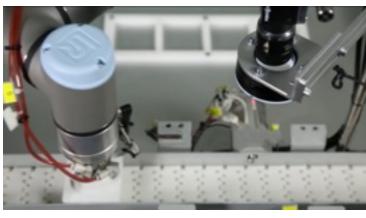
Slicing & IOT

Jari Arkko Ericsson Research IETF 99, July 2017

Use Cases



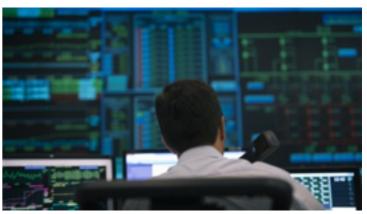
Mass deployment of sensors



Factories



Control of remote equipment

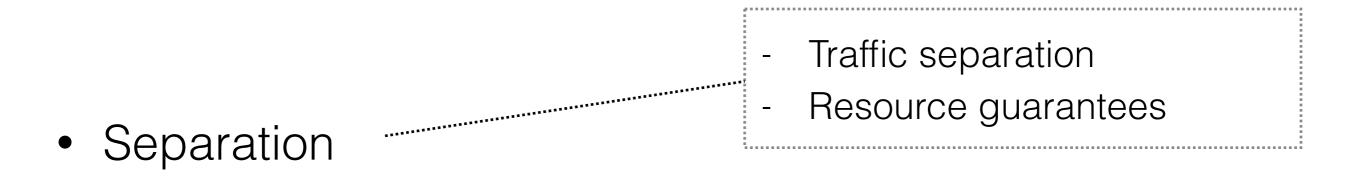


Critical services



Networked traffic systems

- Separation
- Additional control
- Scaling up or down
- Flexibility



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.....

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- Traffic separation
- Resource guarantees
- E.g., for low-latency cases
- Topology control, e.g., mobility endpoint
- Detnet-style reservations

Traffic separation Resource guarantees Separation E.g., for low-latency cases Additional control Topology control, e.g., mobility endpoint **Detnet-style reservations** Scaling up or down Flexibility E.g., run your own 5G network inside a factory

Traffic separation Resource guarantees Separation E.g., for low-latency cases Additional control Topology control, e.g., mobility endpoint **Detnet-style reservations** Scaling up or down Flexibility E.g., run your own 5G network inside a factory Tailor services to the situation Allow evolution (features, sw)

What is Network Slicing?

- One possible minimal definition:
- "Network slicing is <u>network management</u> pertaining to treating different traffic categories in <u>separate virtual networks</u>, with <u>independent</u> <u>resource</u>, technology, and topology choices"

Observations

- What's needed? Much is doable with existing tools: network virtualisation, management tools, SDN, service chaining, ...
 - Are there missing ones? Unclear... can always do more
 - Learn to walk before running (short timelines, incremental process?)



 Be careful with assumptions of silos...
difficulties of deploying QoS... and keep a system perspective (see draft-arkko-arch-low-latency)