

New approaches to multi-tenant networking through software-based networks

VTC 5G panel

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Paradigm Shift at the Control Level:

Controlling Assets You Don't Own

*Service provider Propertix provides a building management service to tenant Lexxor, utilizing **advanced monitoring and actuator** infrastructure embedded into the physical membrane of the building. With this, the control centre of Propertix can determine if the overall state of the building is safe and sound as well as, in case of disturbances, determine root causes and audit malfunctioning.*

*At some point, an emergency occurs when a construction vehicle, operating outside the building, crashes into a large part of the building. The smart environment of the building senses the relevant information and signals an **emergency alert** to the control centre.*

*As a reaction, the control centre **reconfigures** the settings for data collection and aggregation in order to retrieve auditable and comprehensive status information from relevant building areas. Furthermore, the breakage of a physical part of the building triggers an **emergency procedure**. For this, the control centre provides access to the building infrastructure towards the emergency services, helping in assessing the structural damage and optimizing the access of rescue workers.*

Key Aspects

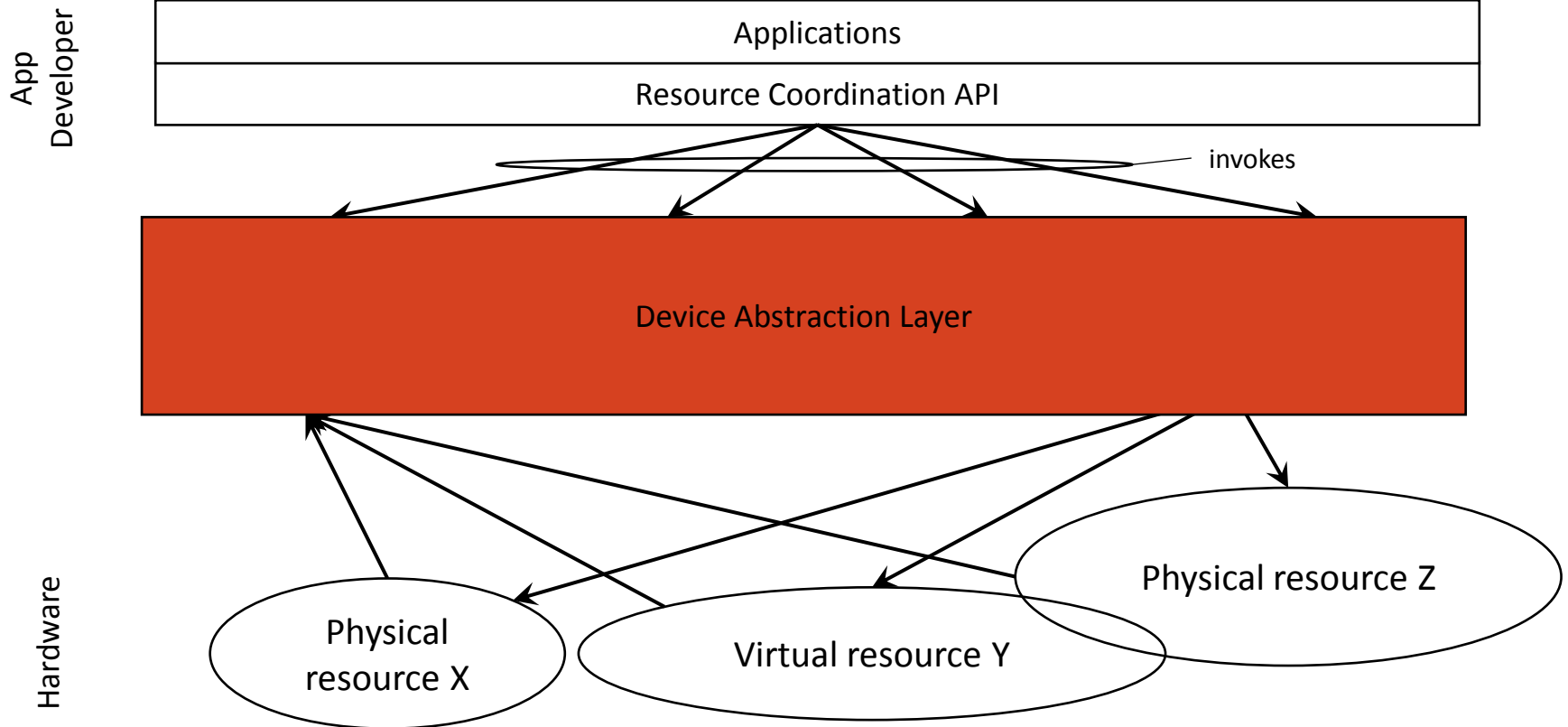
- Rapid change of constraints
 - From data-at-rest to data-in-motion within milliseconds
 - *Dynamicity of control*
- Need for integrating other infrastructures
 - Controlling the previously unknown
 - *Dynamicity of controllability*

A single provider
CANNOT own all possibly
required infrastructure!



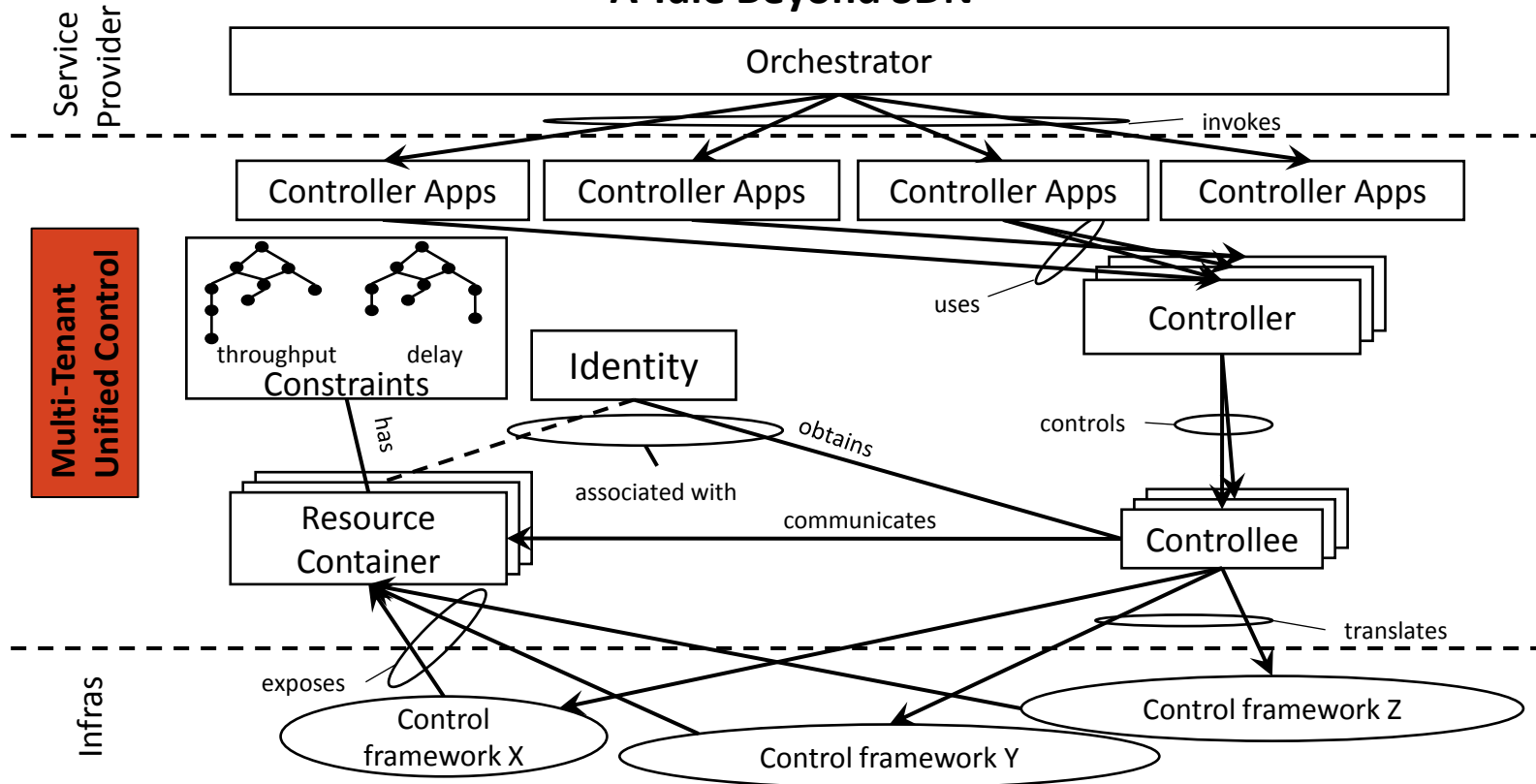
Multi-Tenant Control

Borrowing from Computing Platforms



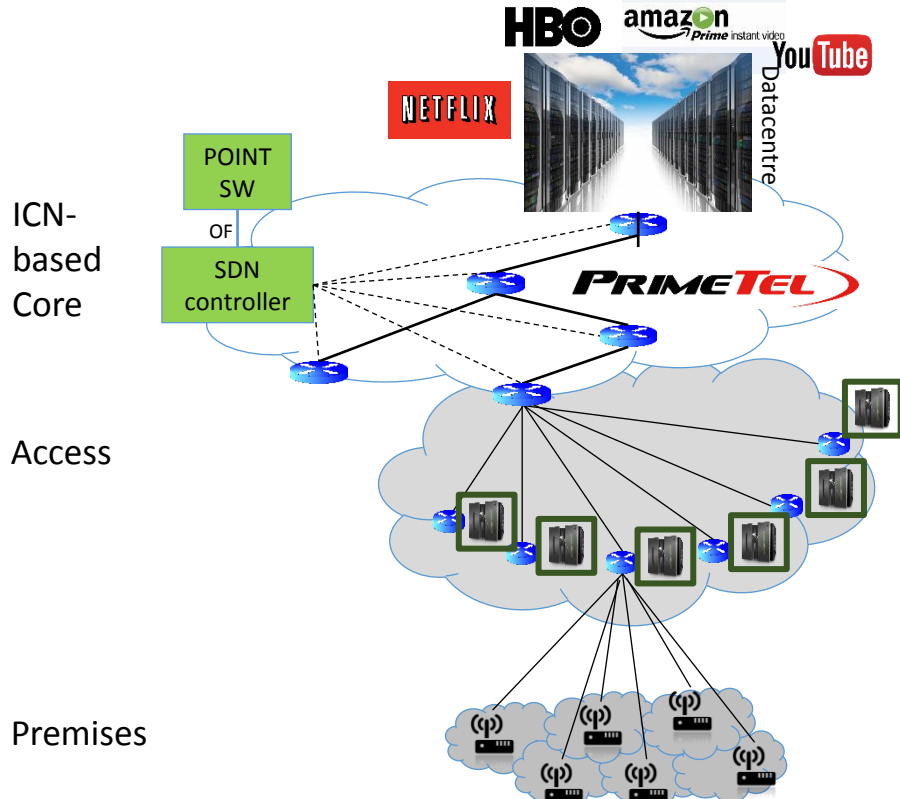
Multi-Tenant Control

A Tale Beyond SDN

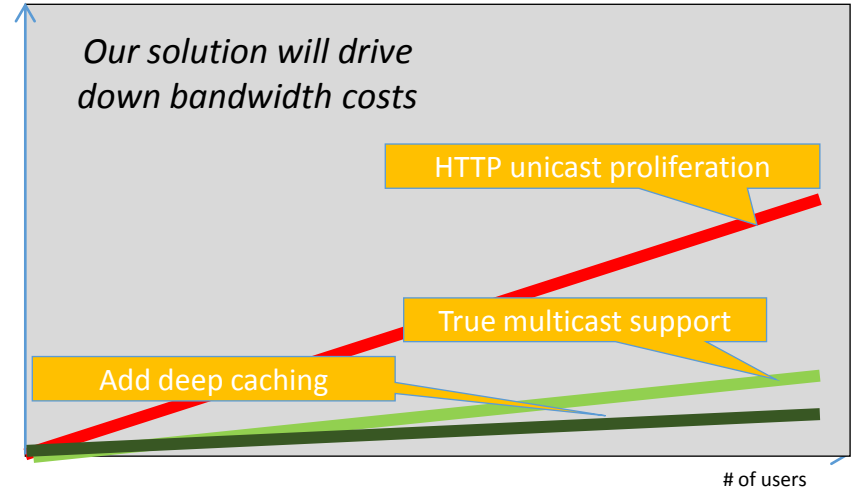


It Looks Like IP, Smells Like IP, but Runs Better!

Addressing Security, Mobility, and New Routing



Bandwidth costs



POINT: The technology solution for competitive 5G operator networks

- Aligns introduction of ICN concepts with evolution of single network upgrades
- Preserves perception of IP services but with novel routing at control level

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Conclusions

- 5G breaks with crucial paradigms in <5G
 - Control across resources you do not own
- New solutions beyond SDN only required
 - Deal with dynamics and the unknown
- Exciting propositions ahead
 - Not only new services but also making current ones more profitable