



Addressing NFV Virtualization Requirements

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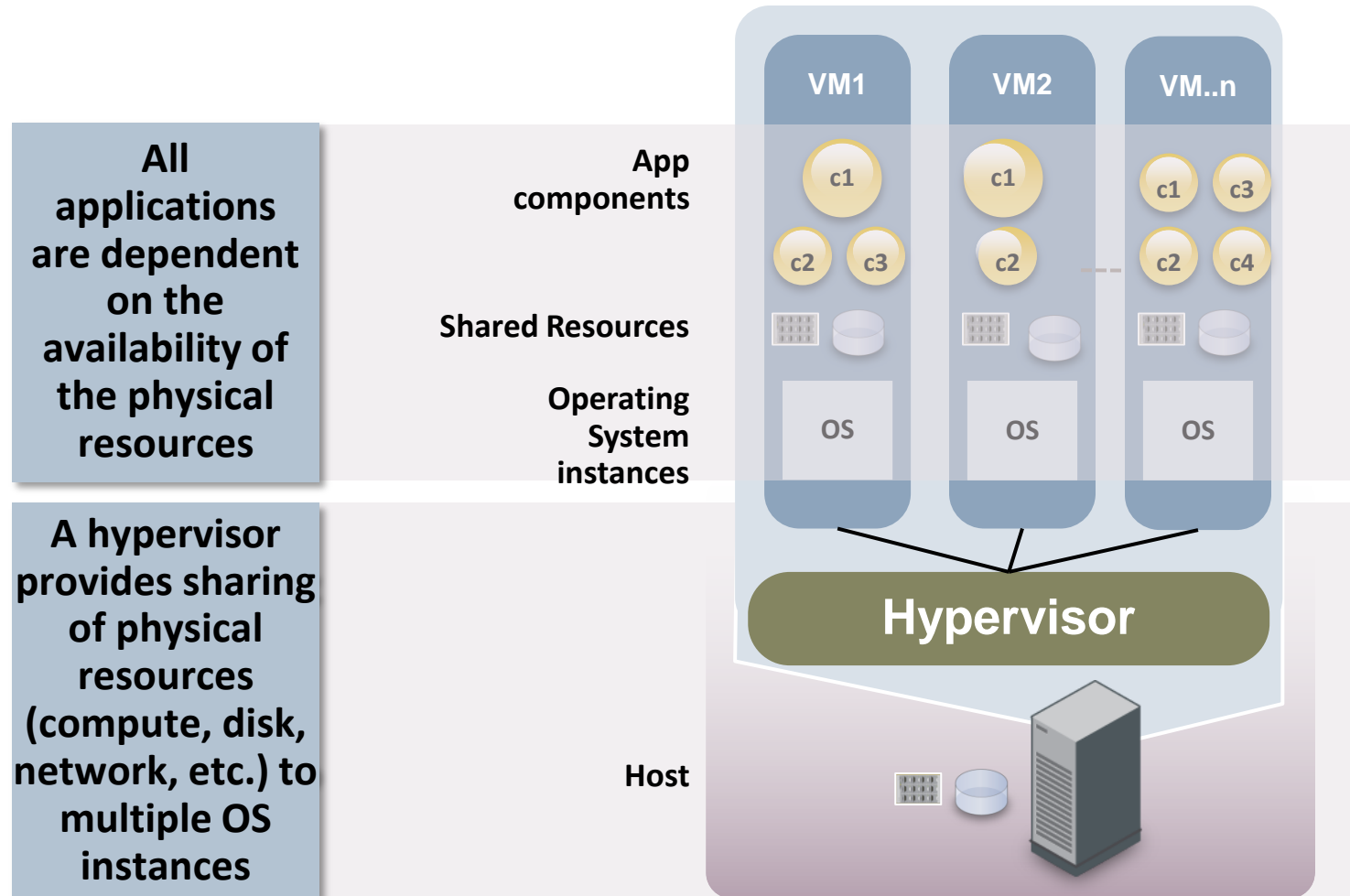
Technical Architect 5

What is NFV?

- Network functions virtualization (NFV) is an initiative to virtualize network functions previously carried out by proprietary, dedicated hardware.
- Developed by the European Telecommunications Standards Institute, NFV will decrease proprietary hardware that's needed to launch and operate network services. This is because functions previously carried out in routers, firewalls, load balancers and other dedicated hardware are now be hosted on virtual machines.

"Ending the Confusion About Software-Defined Networking: A Taxonomy" Joe Scorupa, Mark Fabbi and Akshay Sharma, Gartner, (G00248592)

How virtualization works



Gauging the impact of NFV...

- Characteristics:
 - Functions defined through software not hardware
- Benefits:
 - More standardization
 - Faster (re)configuration
 - Higher agility, higher utilization
 - Lower cost

EFFICIENCY



**Beyond the control plane to
the data plane**



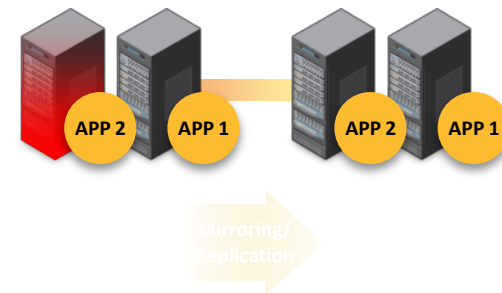
And the risk of NFV... and virtualization in general

- 5.2 – Portability
- 5.3 – Performance
- 5.4 – Elasticity
- 5.5 – Resiliency
- 5.6 – Security
- 5.7 – Service Continuity
- 5.8 – Service Assurance
- 5.9 – Management
- 5.10 – Energy Efficiency
- 5.11 – Co-existence

SPEED

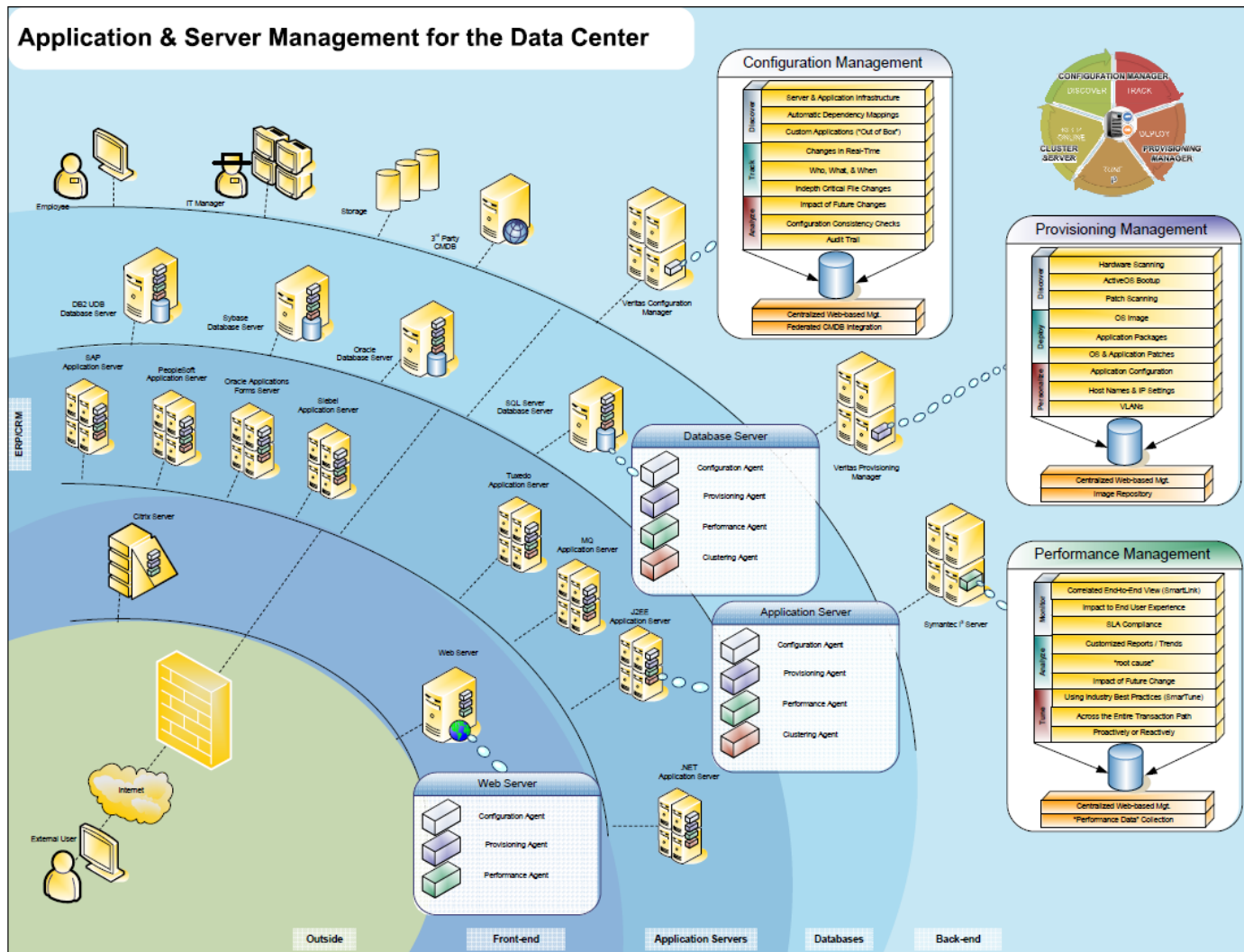


FLEXIBILITY



http://www.etsi.org/deliver/etsi_gs/NFV/001_099/004/01.01.01_60/gs_NFV004v010101p.pdf

Data Centers are complex – Software defined everything can help



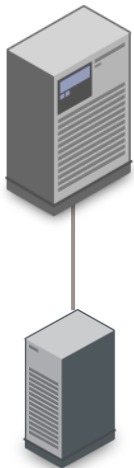
Software defined?



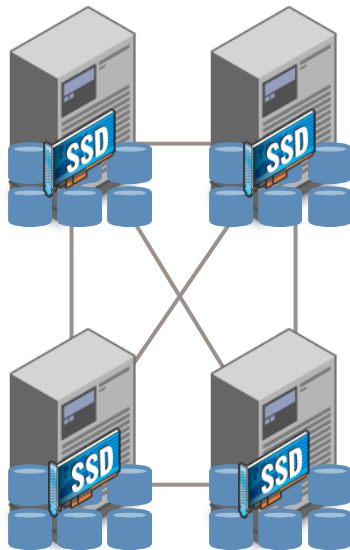
Look to converged systems

Today

Storage Area
Network



Object Storage



Tomorrow

Software
Defined Data
Center

SDN / NFV

VM

VM

Software Defined
Storage



Today

Great for scale-up
Tested through time

Tomorrow

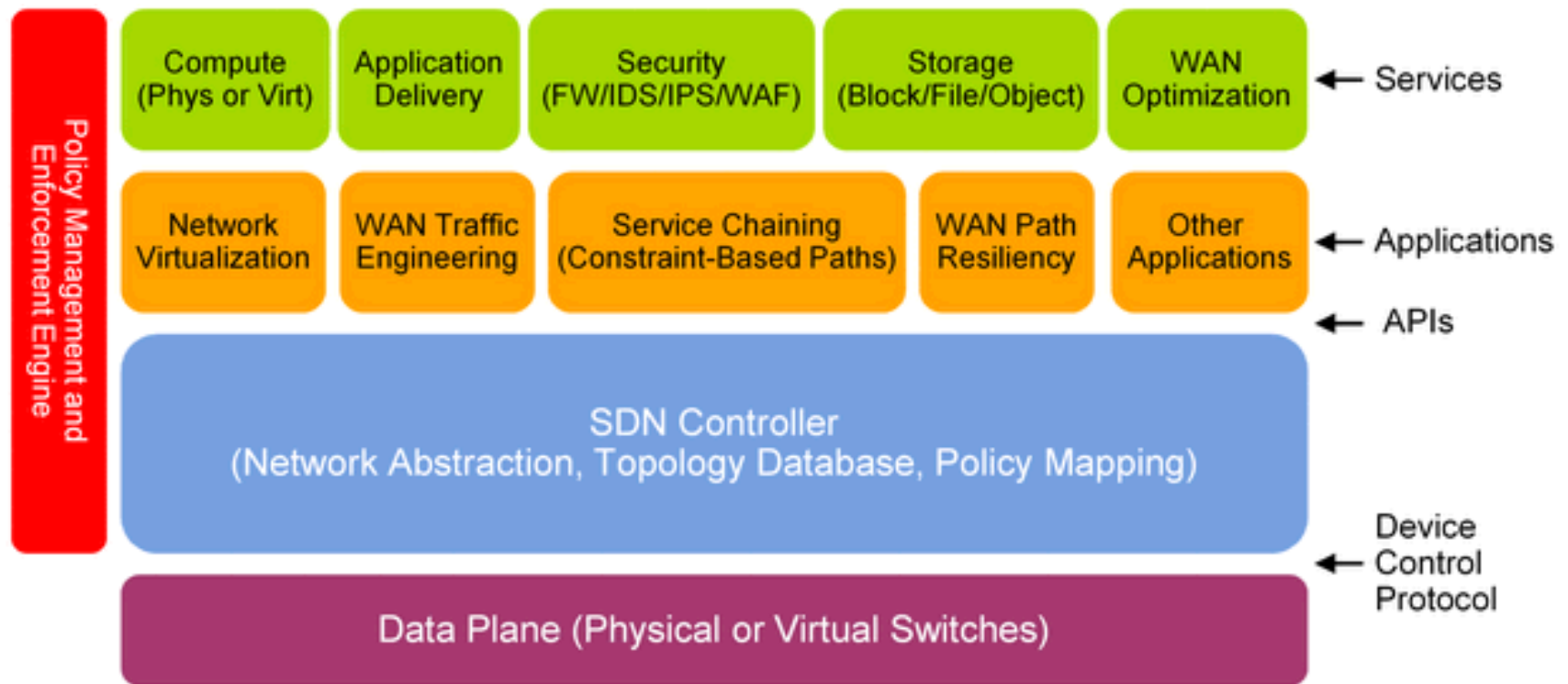
Scale-out OR up
Agile infrastructure
aligned with NFV
and SDN needs

Commodity
hardware

Higher performance
Recoverability

NFV will only be as good as the virtualization!

- The SDN and NFV markets will grow steadily with an ***inflection point*** when ***best-of-breed*** architectures occur



Source: Gartner (October 2013)



Thank you!

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