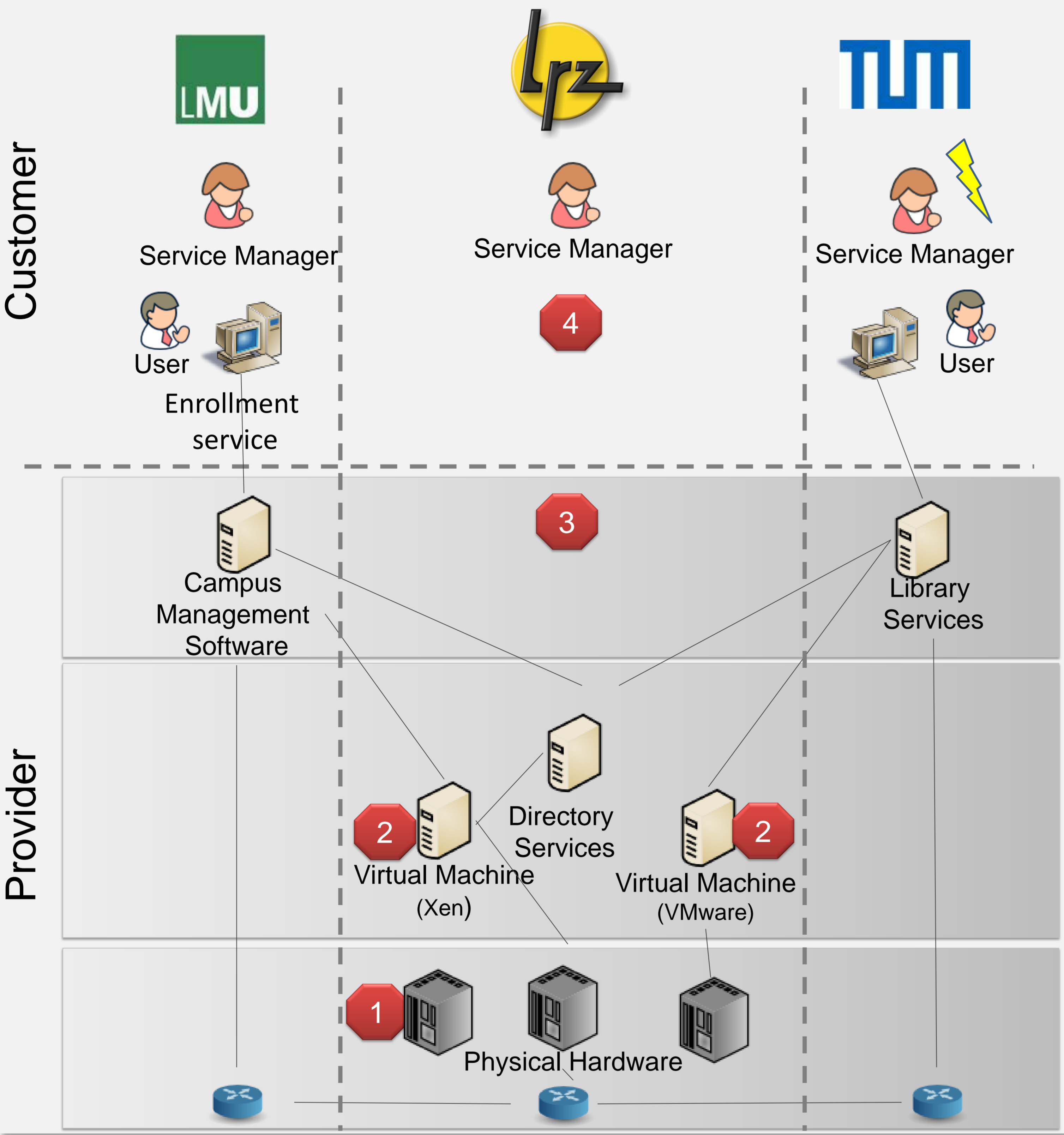
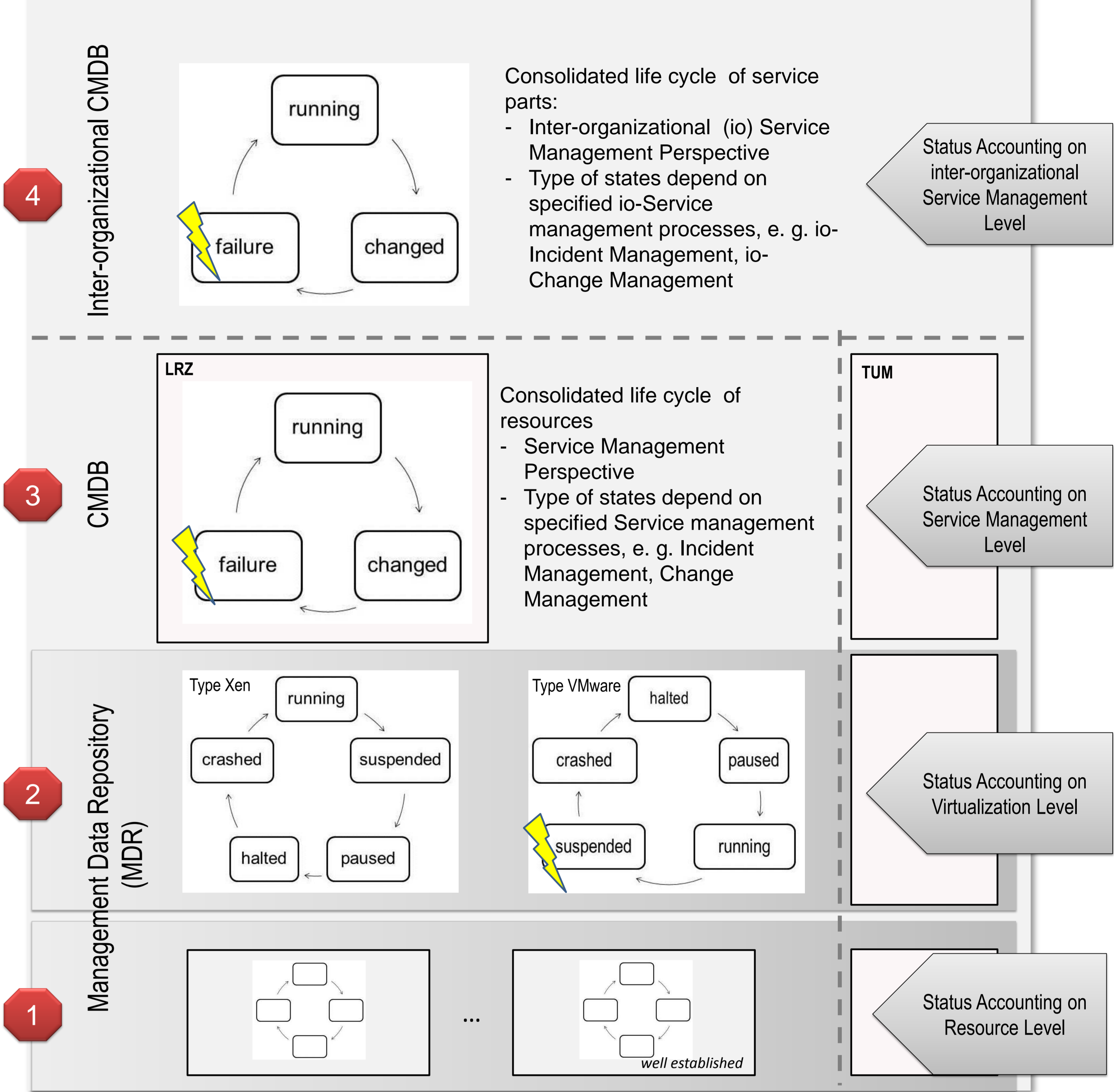


# Configuration management and monitoring of heterogeneous, inter-organizational cloud infrastructures

Use Case: Munich Hybrid Cloud in the Munich Higher Education Network  
(Excerpt)



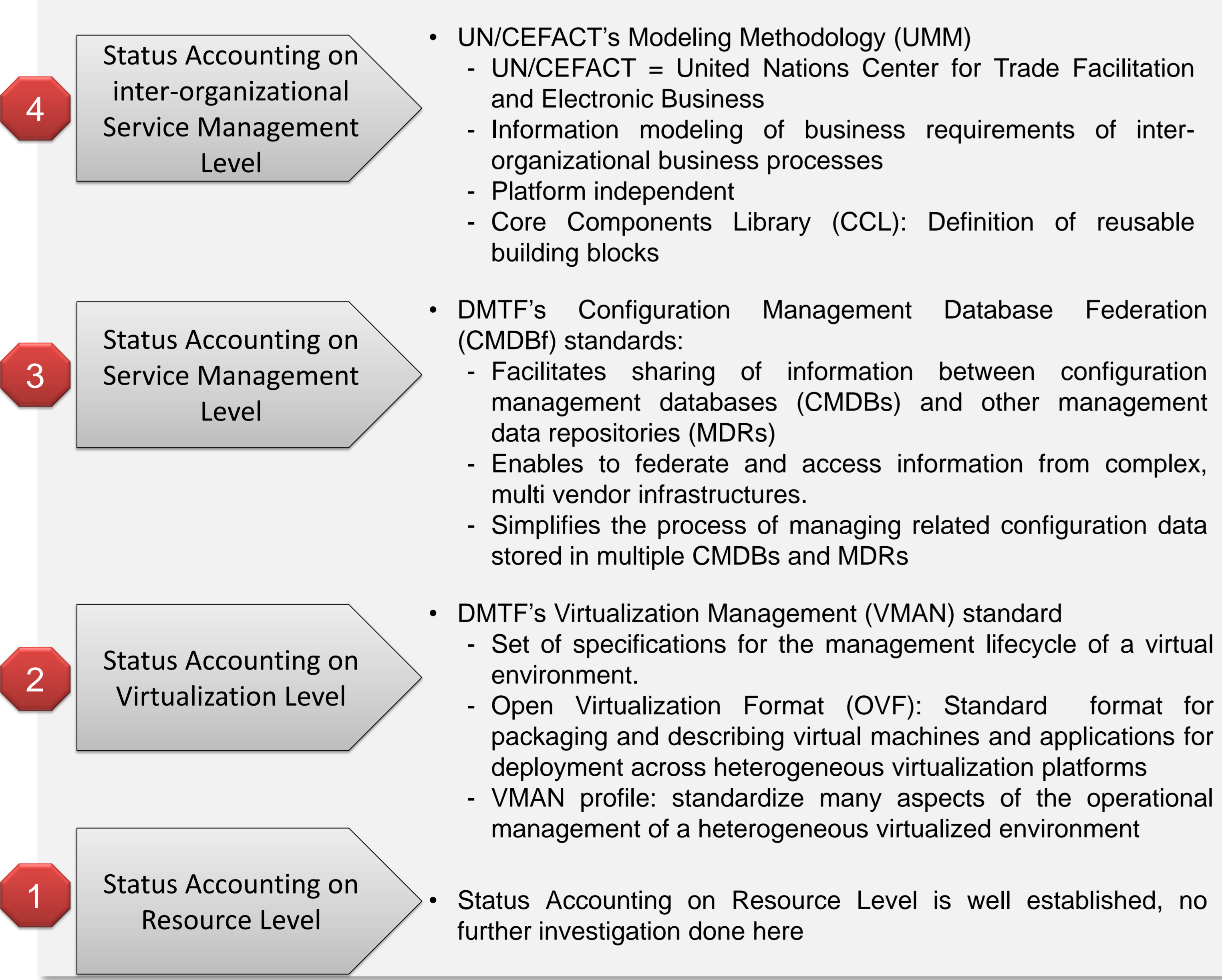
Example: Status Accounting of Virtual Machines



## Challenges:

- Composition of services necessitates multiple different input types for each service manager.
- Service Asset and Configuration Management for hybrid cloud services requires Status Mapping both across organizations and across the different service management levels.

## Our Approach: Standards form the basis on all levels



## Open Issues

- To enable Status Accounting for hybrid cloud deployments corresponding tools must enable modeling of organizations (OM), information and its relationships (IM), communication (CM) and functional (FM) aspects

	OM	IM	CM	FM
UMM	✓	✓	-	-
CMDBf	-	-	✓	-
VMAN	-	✓	-	-

- IT Service Management Perspective
  - Specification of inter-organizational IT Service Management (ITSM) processes influences possible service states, e. g. io-Problem Management -> State "problem"
  - ITSM on intra- and inter-organizational level needs to be aligned
  - Orientation on standards like ITIL or ISO 20000 could ease alignment because of widespread international degree of familiarity
  - FM could be modeled according ITIL for CDMB and io-CMDB
- Proposed Standards are developed "Stand-alone", thus holistic integration efforts necessary
- Emergence = complex patterns and systems might arise out of a multiplicity of relatively simple interactions:
  - Observable in inter-organizational service scenarios?
  - Small cause might have large effect: root cause analysis has to be done now inter-organizational
- MDR versus CMDB: replace or integrate decision for any MDR necessary