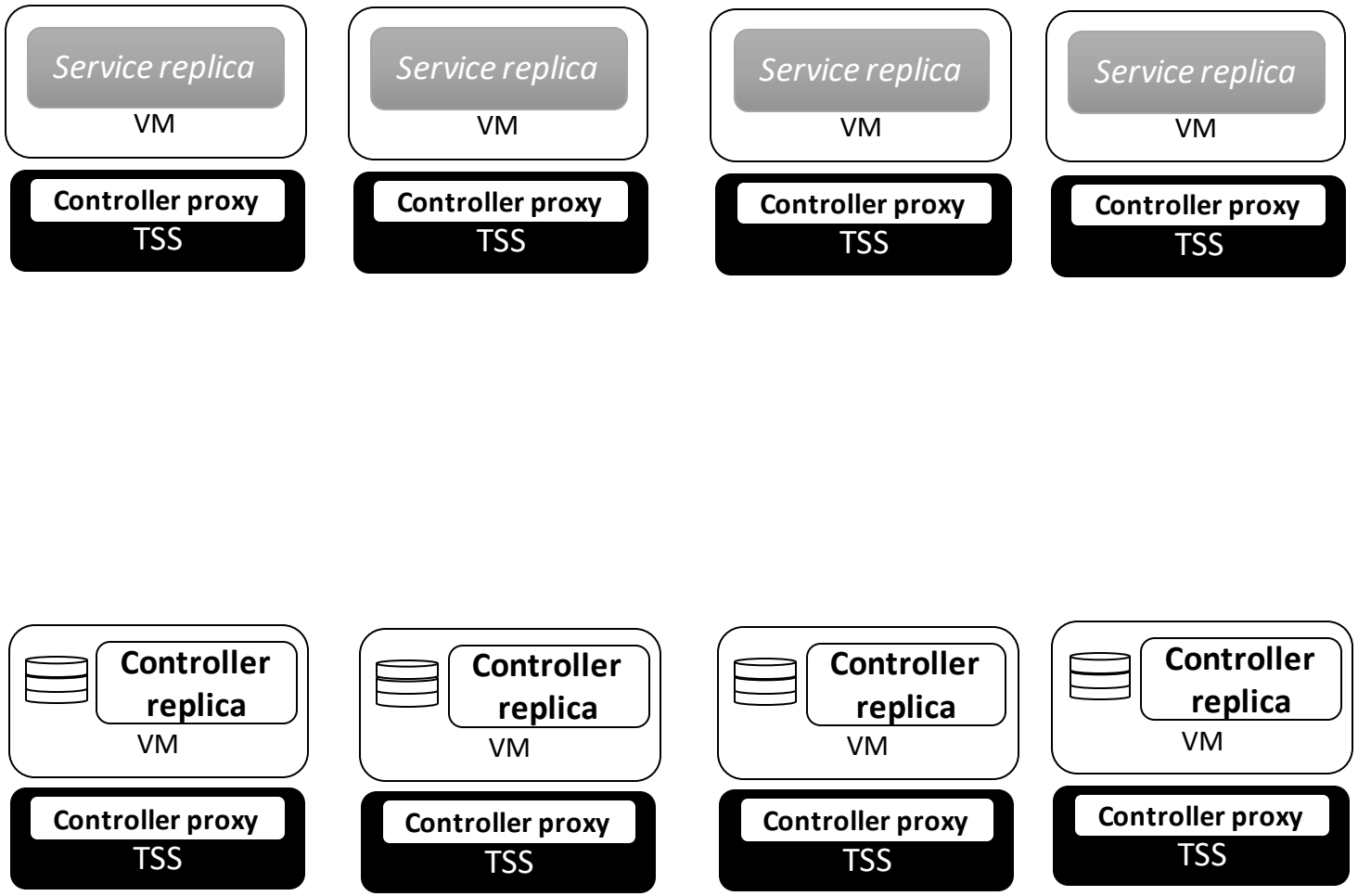
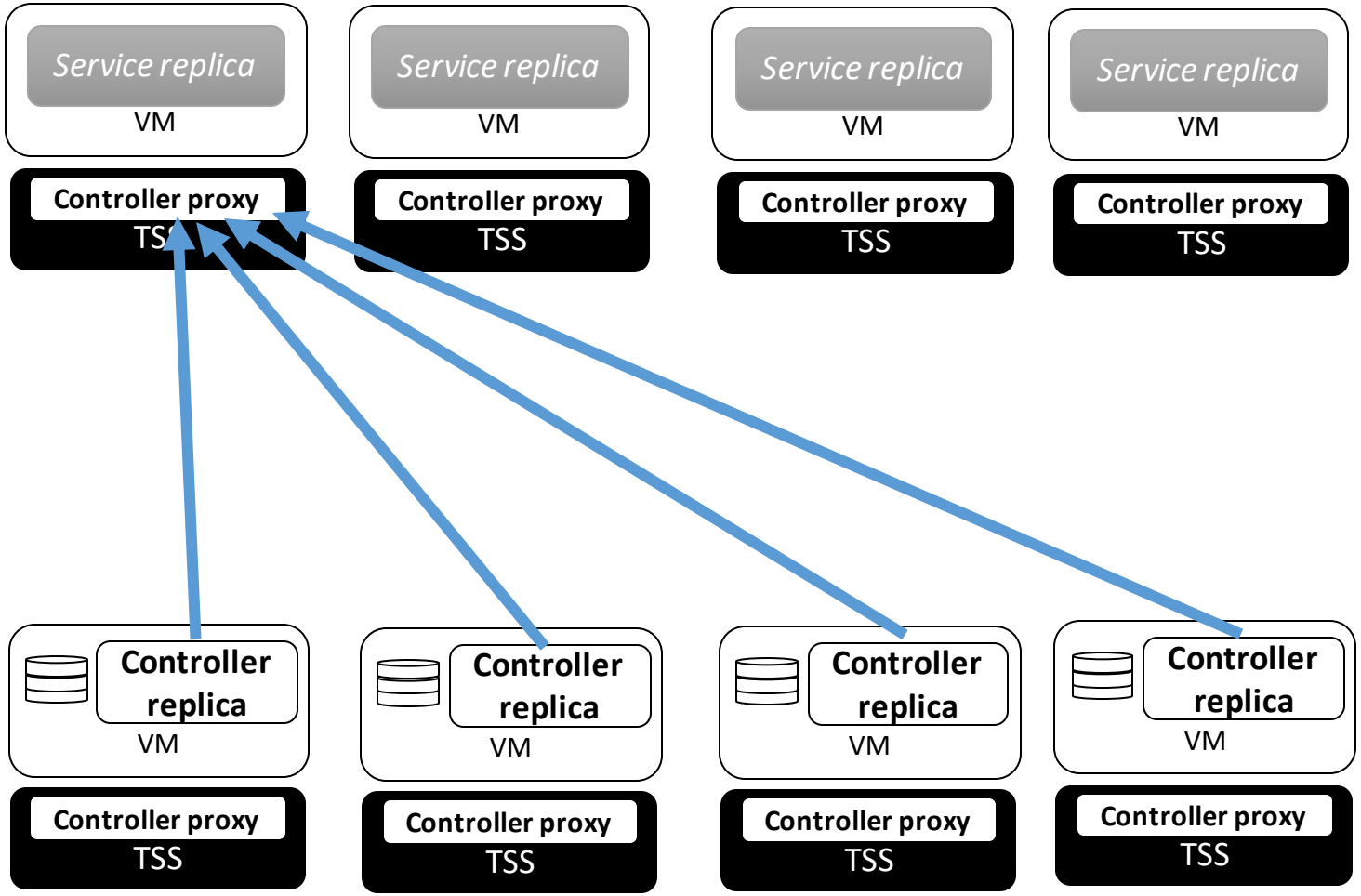
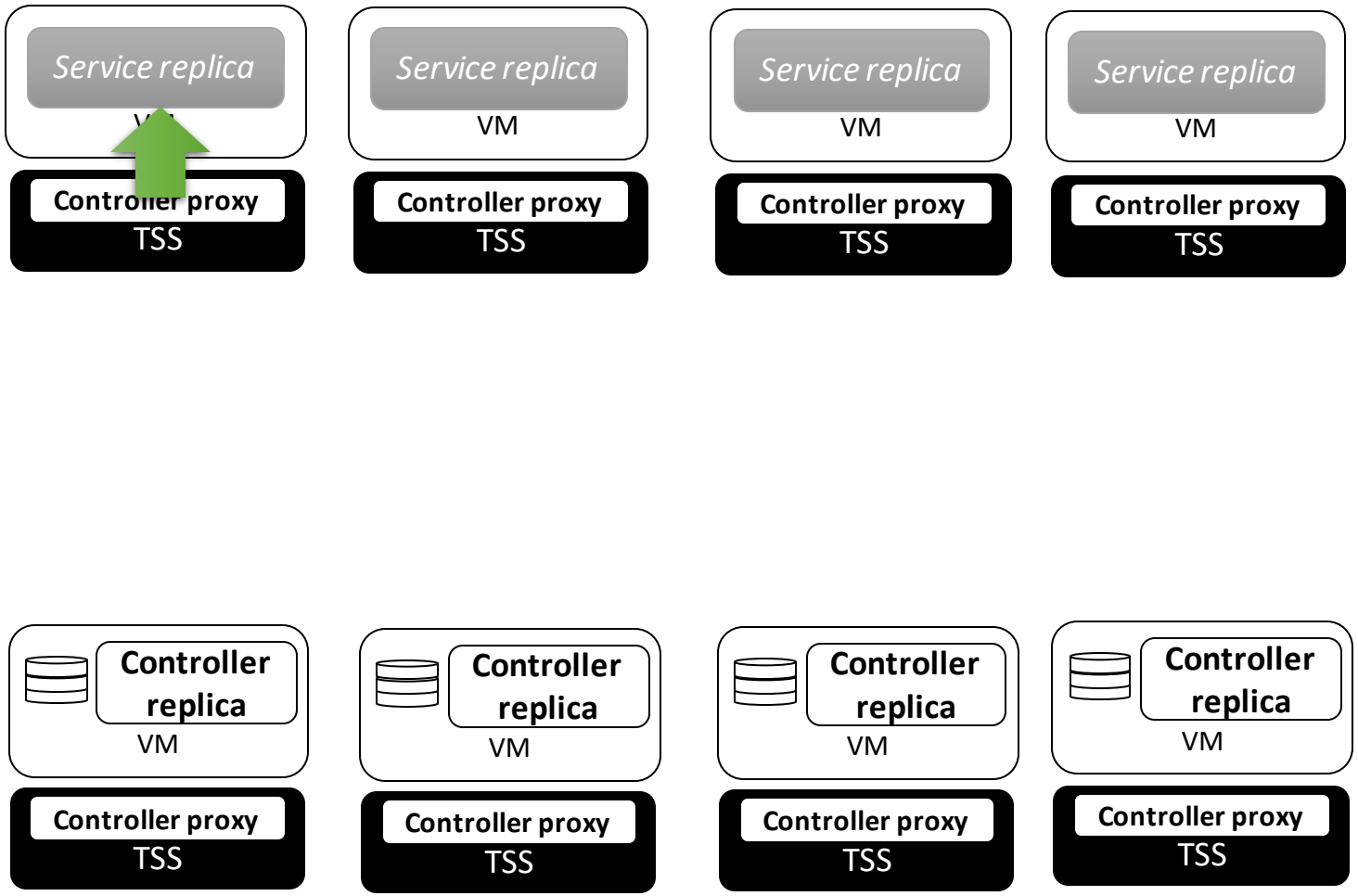

Service replica
VM
Controller proxy
TSS
Controller replica
VM
Controller proxy
TSS

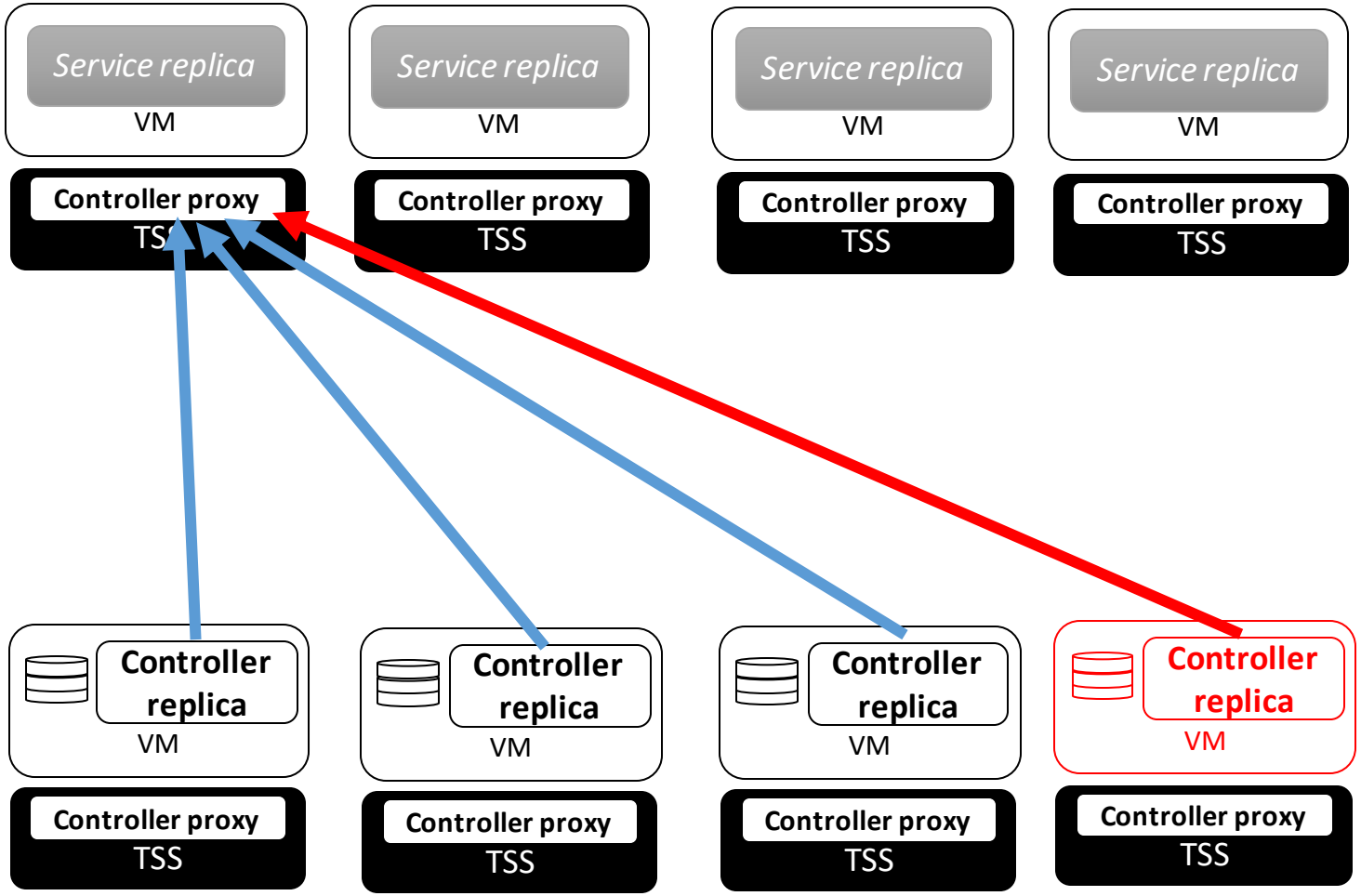

Service replica
VM
Service replica
VM
Service replica
VM
Service replica
VM
Controller proxy
TSS
Controller proxy
TSS
Controller proxy
TSS
Controller proxy
TSS
Controller replica
VM
Controller replica
VM
Controller replica
VM
Controller replica
VM
Controller proxy
TSS
Controller proxy
TSS
Controller proxy
TSS
Controller proxy
TSS

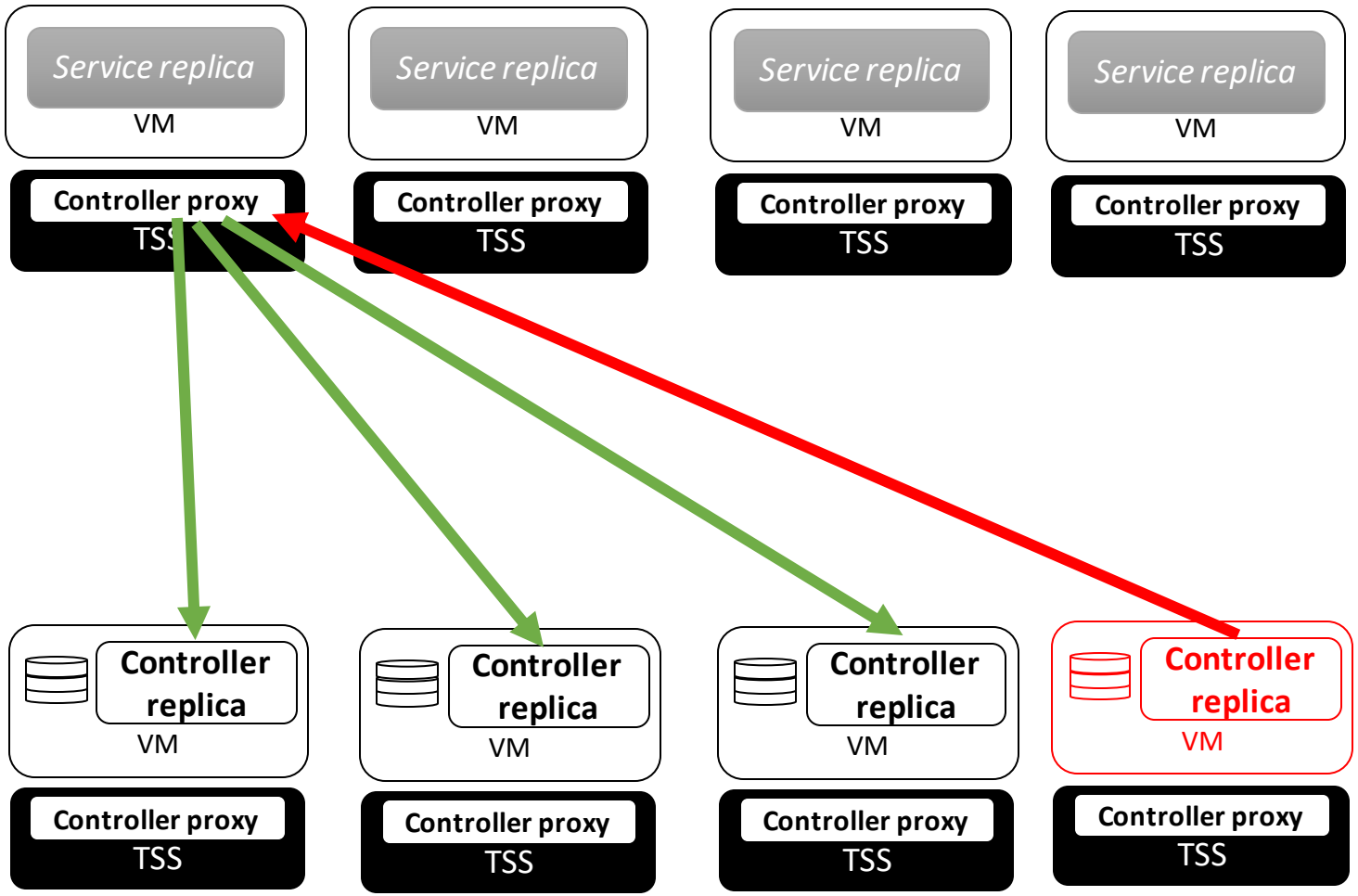
Service Replicas recovery


Service replica
VM
Service replica
VM
Service replica
VM
Service replica
VM
Controller proxy
TSS
Controller proxy
TSS
Controller proxy
TSS
Controller proxy
TSS
Controller replica
VM
Controller replica
VM
Controller replica
VM
Controller replica
VM
Controller proxy
TSS
Controller proxy
TSS
Controller proxy
TSS
Controller proxy
TSS

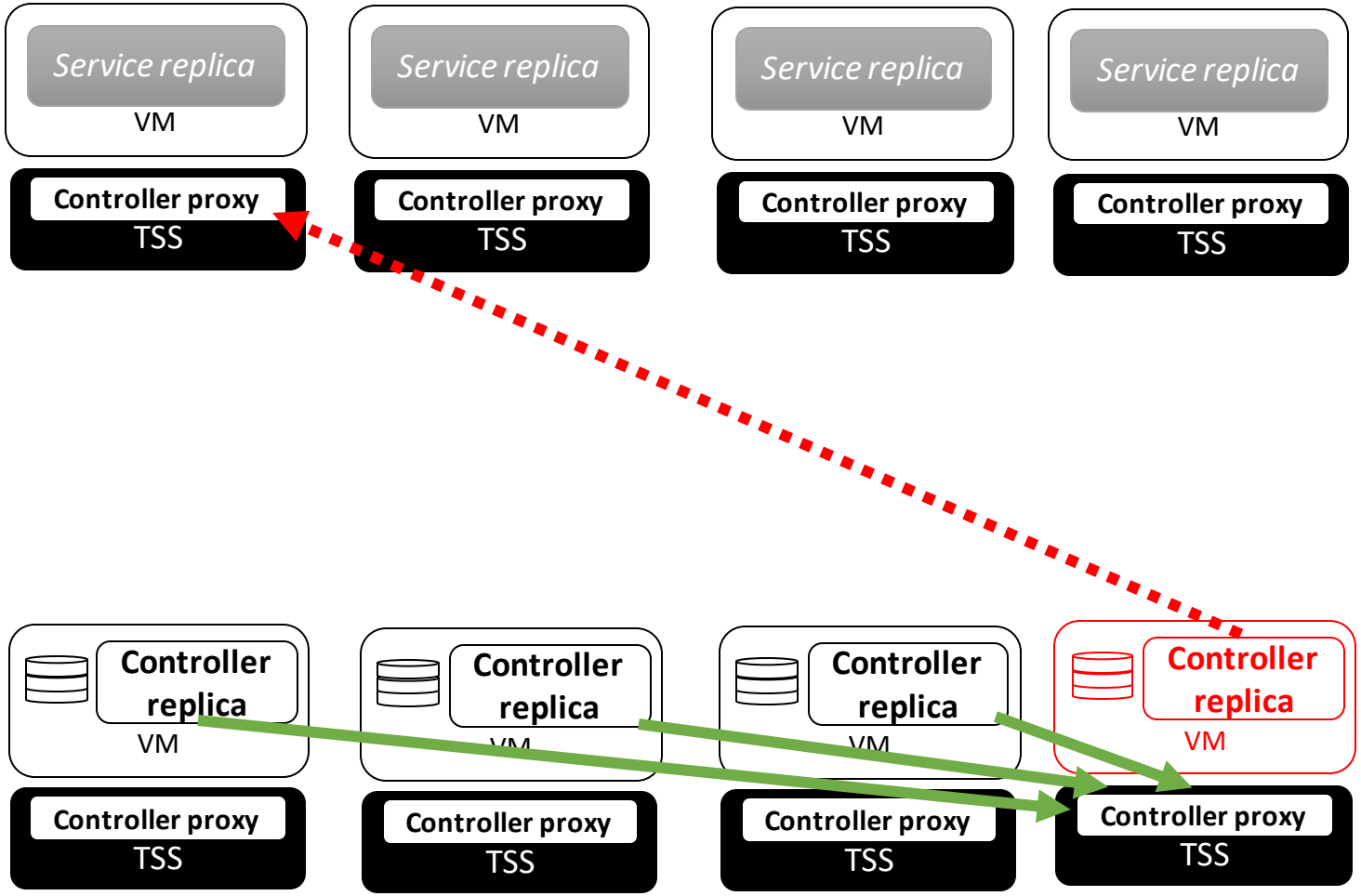

Service replica
VM
Service replica
VM
Service replica
VM
Service replica
VM
Controller proxy
TSS
Controller proxy
TSS
Controller proxy
TSS
Controller proxy
TSS
Controller replica
VM
Controller replica
VM
Controller replica
VM
Controller replica
VM
Controller proxy
TSS
Controller proxy
TSS
Controller proxy
TSS
Controller proxy
TSS

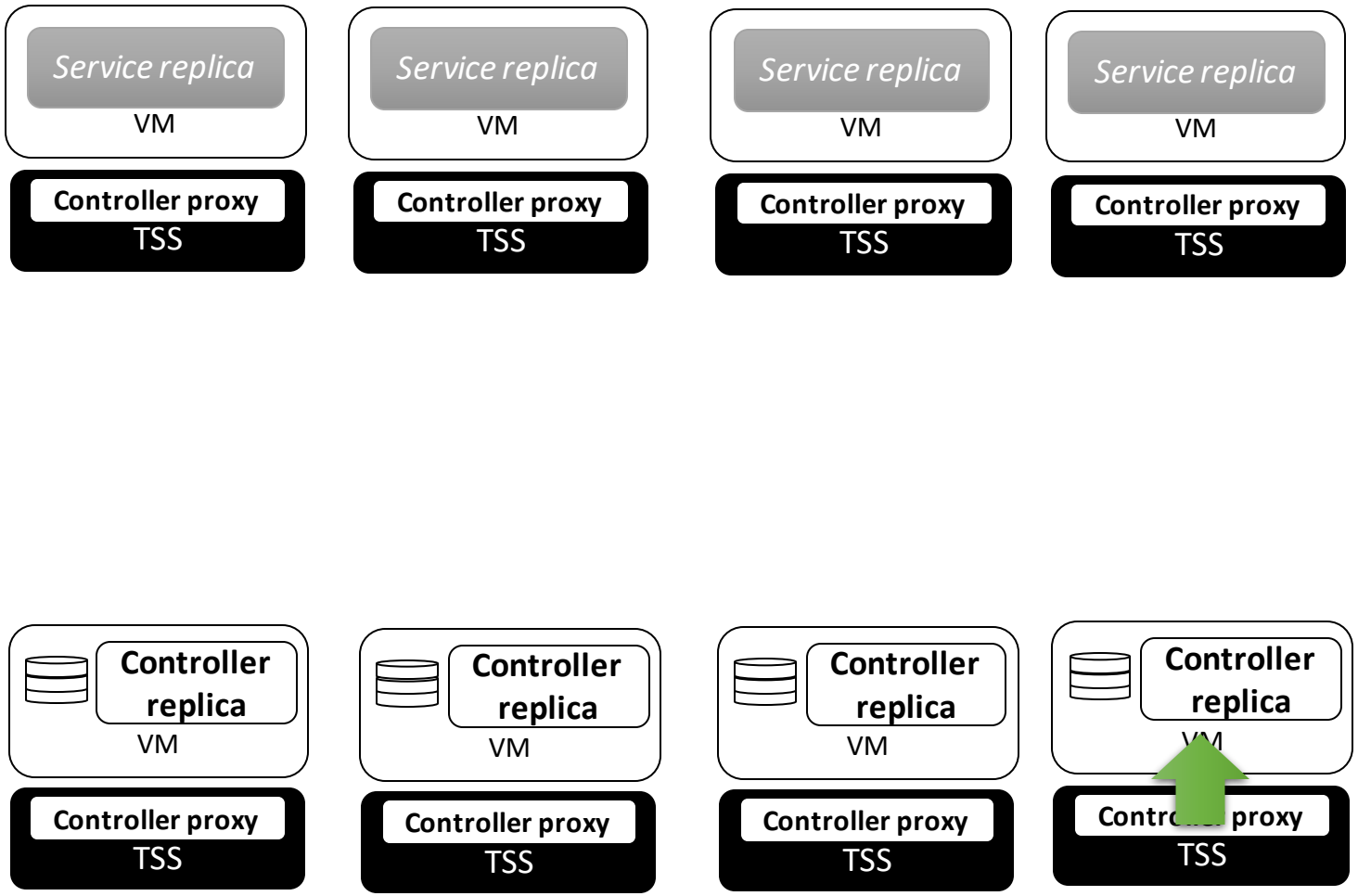
Controller Replica recovery


Service replica
VM
Service replica
VM
Service replica
VM
Service replica
VM
Controller proxy
TSS
Controller proxy
TSS
Controller proxy
TSS
Controller proxy
TSS
Controller replica
VM
Controller replica
VM
Controller replica
VM
Controller replica
VM
Controller proxy
TSS
Controller proxy
TSS
Controller proxy
TSS
Controller proxy
TSS

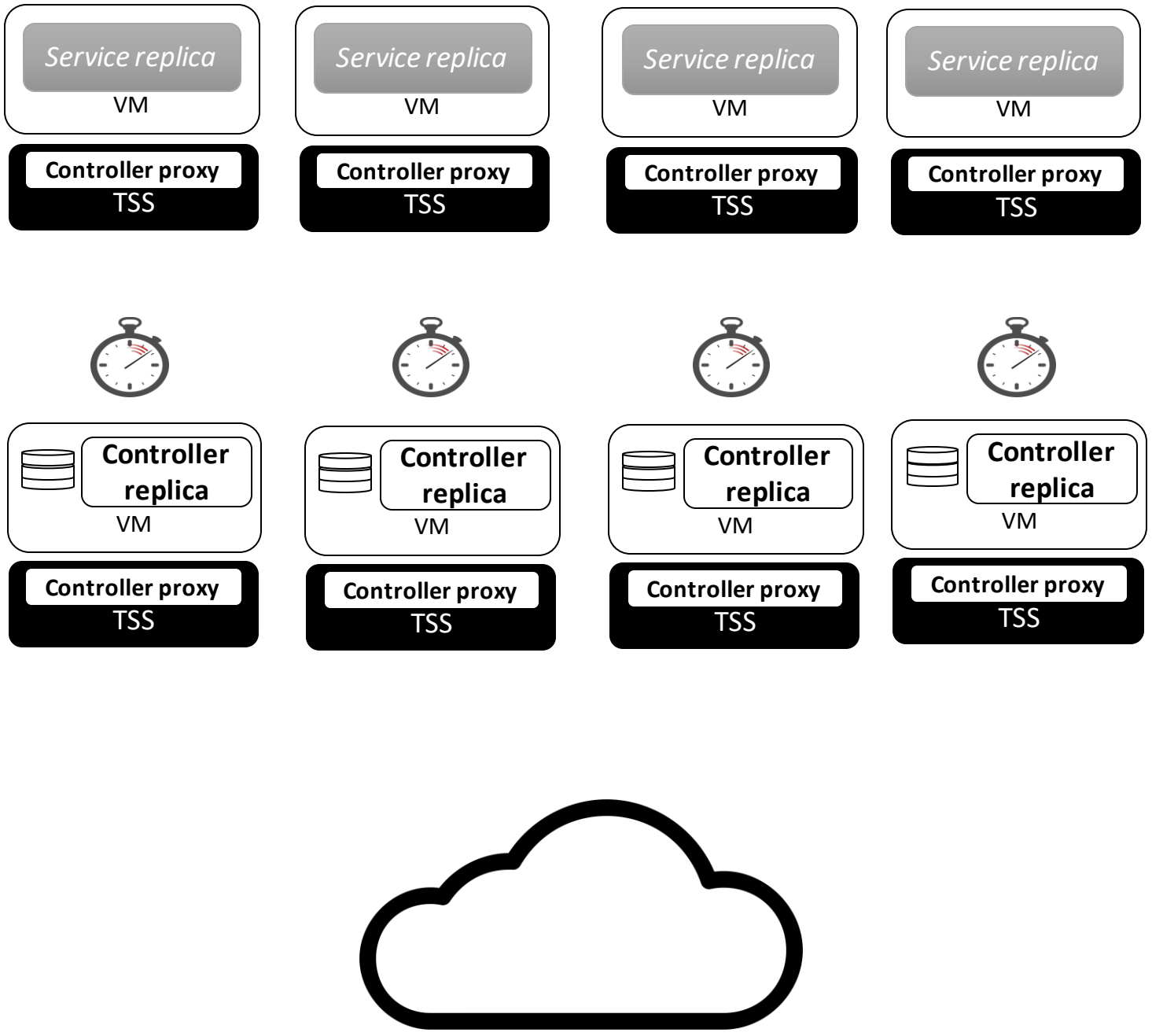


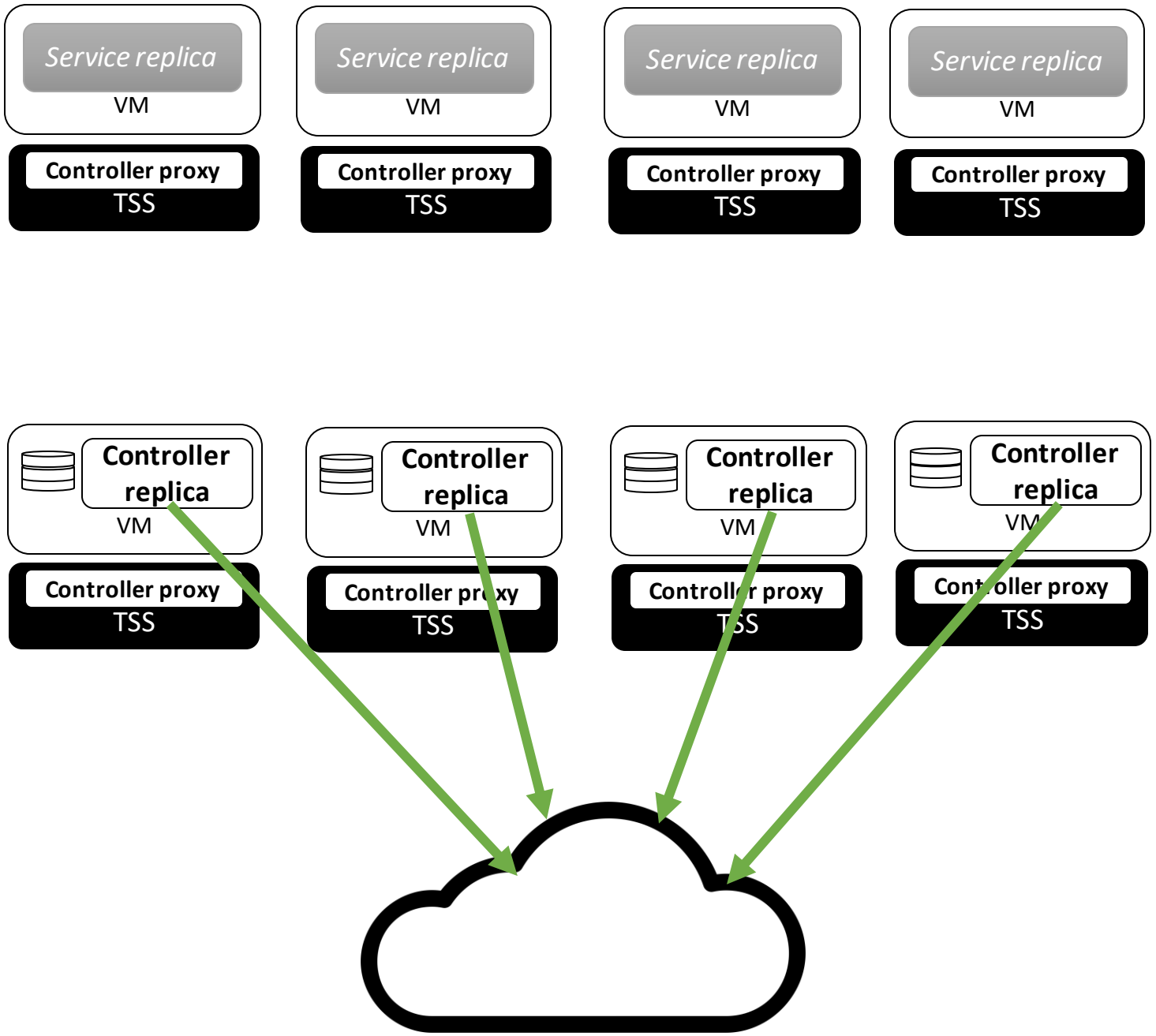
Why do we need to go through replicas?
Could we use end-to-end controller proxy communication since they are trusted?
1) no) we need to keep the state on the replicas
2) avoid signatures? With signature proxy2proxy we need to wait for one message only
Maybe domain separatio is enougth to justify their separation.

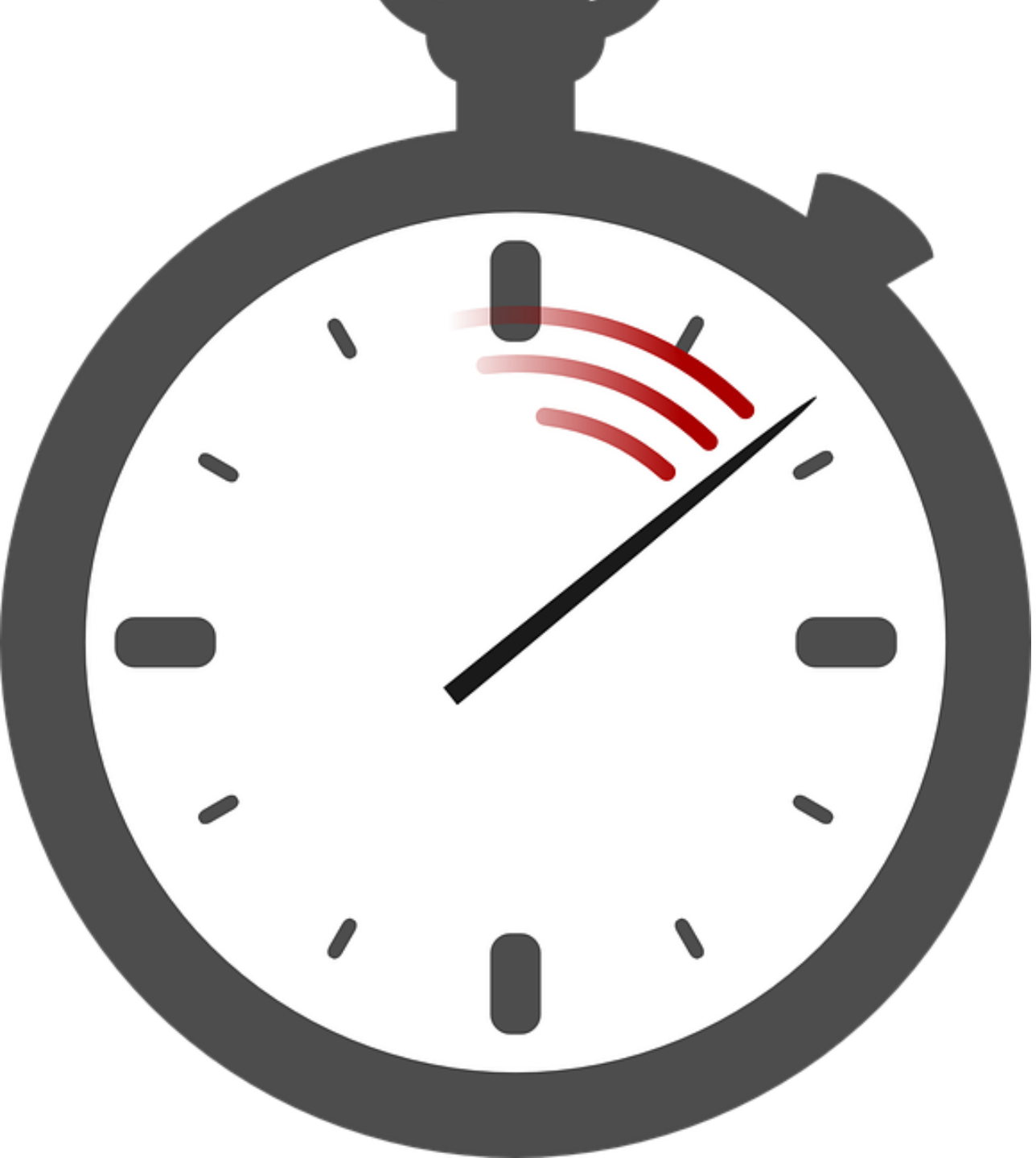

Service replica
VM
Service replica
VM
Service replica
VM
Service replica
VM
Controller proxy
TSS
Controller proxy
TSS
Controller proxy
TSS
Controller proxy
TSS
Controller replica
VM
Controller replica
VM
Controller replica
VM
Controller replica
VM
Controller proxy
TSS
Controller proxy
TSS
Controller proxy
TSS
Controller proxy
TSS


Service replica
VM
Service replica
VM
Service replica
VM
Service replica
VM
Controller proxy
TSS
Controller proxy
TSS
Controller proxy
TSS
Controller proxy
TSS
Controller replica
VM
Controller replica
VM
Controller replica
VM
Controller replica
VM
Controller proxy
TSS
Controller proxy
TSS
Controller proxy
TSS
Controller proxy
TSS

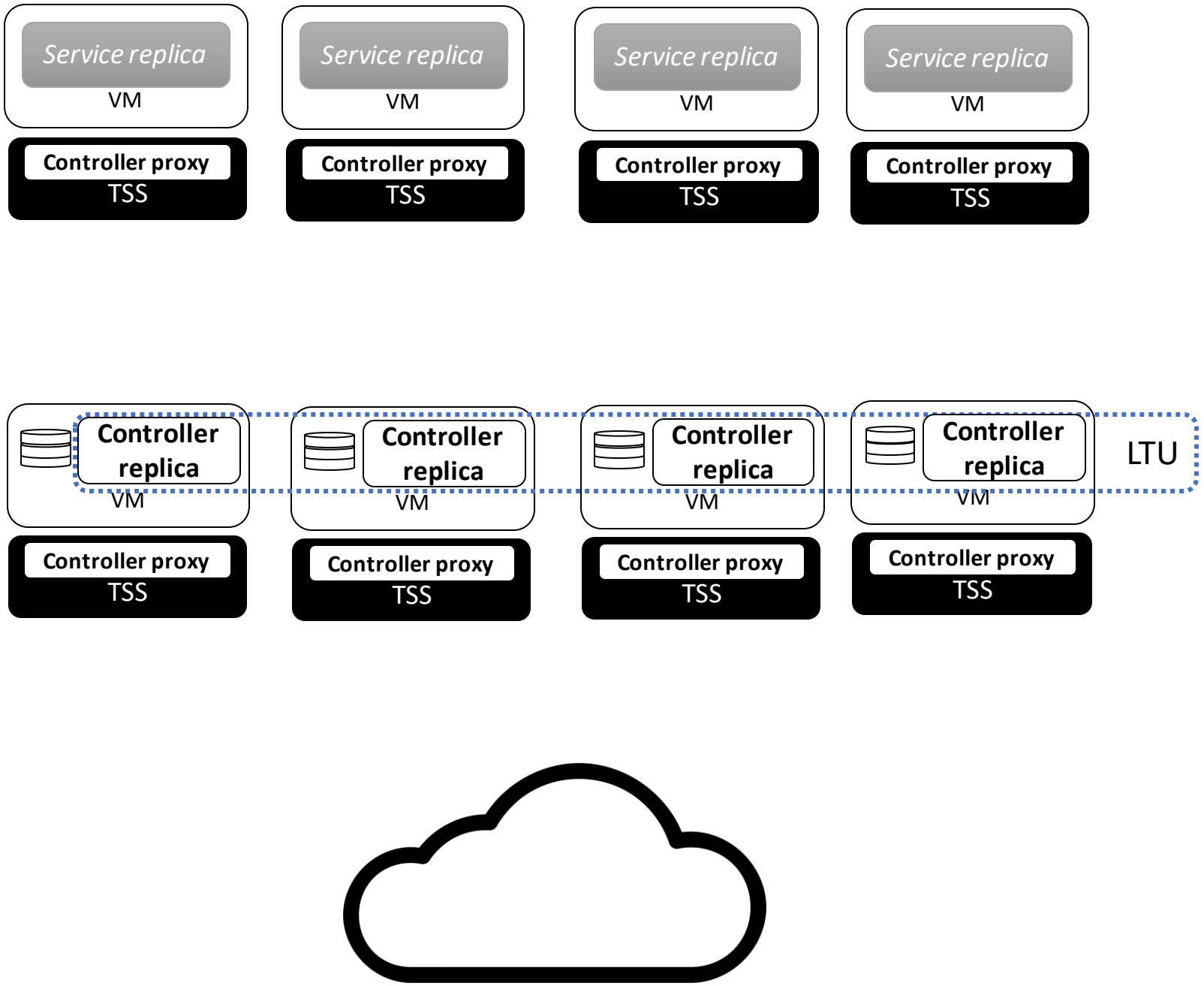
Call OSINT


Service replica
VM
Service replica
VM
Service replica
VM
Service replica
VM
Controller proxy
TSS
Controller proxy
TSS
Controller proxy
TSS
Controller proxy
TSS
Controller replica
VM
Controller replica
VM
Controller replica
VM
Controller replica
VM
Controller proxy
TSS
Controller proxy
TSS
Controller proxy
TSS
Controller proxy
TSS


Service replica
VM
Service replica
VM
Service replica
VM
Service replica
VM
Controller proxy
TSS
Controller proxy
TSS
Controller proxy
TSS
Controller proxy
TSS
Controller replica
VM
Controller replica
VM
Controller replica
VM
Controller replica
VM
Controller proxy
TSS
Controller proxy
TSS
Controller proxy
TSS
Controller proxy
TSS



Logical time out protocol

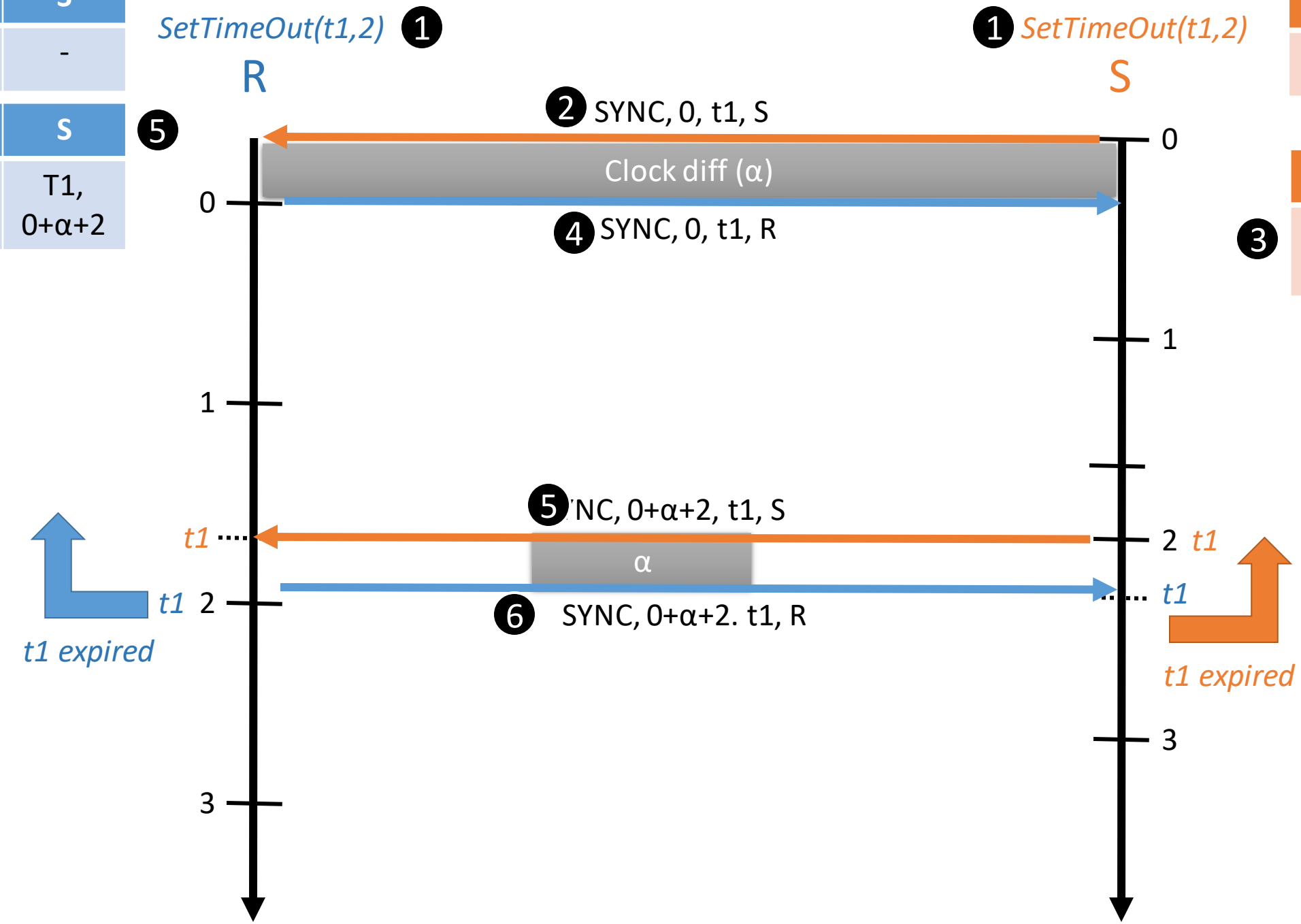

Service replica
VM
Controller proxy
TSS
Service replica
VM
Controller proxy
TSS
Service replica
VM
Controller proxy
TSS
Service replica
VM
Controller proxy
TSS
Controller replica
VM
Controller proxy
TSS
Controller replica
VM
Controller proxy
TSS
Controller replica
VM
Controller proxy
TSS
Controller replica
VM
Controller proxy
TSS
LTU

R	S
T1, 2	-

R	S
T1, 2	T1, 0+α+2

S	R
T1,2	-

R	S
T1,2	T1, 0+α+2



Distributed randomness