Fault Tolerance :

• Aim of Fault Tolerance is similar to HA,but in terms of availability it provides 0% downtime and full availability as machine does not goes down or restarts
• This is meant for mision critical applications/servers.Eg : Robotic surgery,ARM,Auto-Pilot System,Spacecraft Mission
• VMware lockstep technology is used in FT
• With FT a secondary VM is created in another host using distributed resources scheduler.This VM is exact replica of the Primary VM.
• A Fault-tolerant virtual machine and its secondary copy are not allowed to run in same host.This restriction ensures that a host failure can not result in loss of both VM
• Primary and secondary work in lockstep i.e the lockstep technology captures the current state and events of primary VM and sends them to secondary VM if primary goes down instantly secondary VM takes over and continue operation
• It requires extra standby VM,therefore it is a costlier solution
• Fault-tolerance avoid ‘split brain situation’ which can leads to two active copies of a vm after recovery from a failure
• FT works on VM level.Therefore we can enable or disable FT on VM
• The primary and secondary VM continuously echange heartbeat
• This exchange allows the status of one another to ensure that FT is contunuously maintained

Virtual Machine Template :

• We can convert a fully configured VM into a Virtual Machine Template
• This can be used to rapidly deploy large numbers of new VM that are configured like the original VM