Section 1: Week 1: Software Defined Networks

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# Software Defined Networking

Traditional networks are built as ‘thick closed systems’ and are intended for deployments that are statically provisioned. The monolithic design of these Network Functions (NF) (e.g. routers, load balancers, protocols, etc.) limits innovation, as it is non-trivial to replace an individual component within the system. This introduces complexities for organizations as they move toward dynamic systems and agile methodologies.

To improve on these scenarios the notion of Virtual Network Functions (VNF) transitioned traditional network functions onto hypervisors. This allowed for dynamic provisioning and elastic scenarios. While these virtualized technologies addressed challenges related to deployment of network functions, these virtual functions are cloned after their physical monolithic predecessors.