Abstract: The Kubernetes http://kubernetes.io open source project takes Google's internal experience of developing large scale distributed applications in its own datacenters and makes it available to the wider world. Capitalizing on the rapid uptake of Docker http://https://www.docker.com/ containers, Kubernetes provides a declarative mechanism for describing the architecture of a distributed system by composing and managing Docker containers. These declarative descriptions are used to deploy and maintain large distributed system e.g. adjusting the number of replicas of a service to meet changing traffic patterns. The system targets a variety of cloud providers including Google's Compute Engine, Amazon's EC2 and Microsoft's Azure. This talk describes the advantages of a container based distributed application development model mapped onto an amorphous collection of anonymous resources (cattle) with the more conventional model where applications are mapped directly onto specific virtual machines (pets).

Biography: Satnam Singh is a software engineer working at Facebook. He has previously worked on projects relating to cloud computing, functional programming, compilers, embedded systems, hardware design tools and formal verification at Google, Microsoft, Xilinx and the University of Glasgow.