CS 6343 Cloud Computing (3 semester credit hours) Different layers of cloud computing, infrastructure as a service (IaaS), platform as a service (PaaS), and software as a service (SaaS). Data centers. Resource management, power management, and health monitoring in IaaS cloud. Hadoop MapReduce for big data computing. PaaS examples such as GAE, Force.com. SaaS concepts and enabling technologies. Cloud storage theory and practical solutions such as GFS, Big Table, HDFS, HBase, Dynamo, Pnuts. Erasure coding and secret sharing based cloud storage. Virtualization and emulation. Server virtualization, storage virtualization, and network virtualization. Cloud security. Prerequisites: CS 5343 and CS 5348. (3-0) S (2016-02-06 00:01:06)