SLIDE 3:

Among these advantages, easier to scale is probably one of the most important ones. In centralized DBMS, there is an upper bound on the performance of a single computer. As a contrast, with distributed DBMS, one can simply add additional computers to the network.

SLIDE 4:

Locks: In this protocol, instead of usual R and W locks in 2PL, there are four different type of locks. RR and RU locks are for reading. When a ROT wants to read a data record, it requests an RR lock on the object. When a UT wants to wants to read a data record, it requests an RU lock on the object. EW lock and SPW lock are for writing. When a UT wants to write a data object x, it first requests an EW lock of that object. After the write is done, the EW lock is converted into SPW lock. The SPW lock is hold by UT until it commits/aborts.

SLIDE 6:

This is an example for SSLR. In the example, T1 and T3 are UTs and T2 is an ROT. T21 and T22 are speculative executions of T2, where T21 uses the before image and T22 uses the after image. When T2 completes and wants to commit, we can see that T1 haven’t commit yet, so we choose T21 as the appropriate speculative execution.

SLIDE 8:

IF ASKED: 2PC: In first phase, it sends PREPARE message to all the participant sites. If all sites respond with “yes” then it issues GLOBAL COMMIT message. If any one of the sites respond negatively then the transaction is aborted and GLOBAL ABORT message is sent to all participants sites.[1]