

DISTRIBUTED SYSTEMS

UNIT – I

Characterization of Distributed Systems – Introduction – examples – key characteristics, Historical background – Design Goals: Introduction, Basic design issues – user requirements.

UNIT – II

Networking and Internetworking – Introduction – Network technologies – protocols. Inter process communication : Introduction – Building blocks – client – server communication – Group communication, Remote procedure calling: Introduction – Design issues.

UNIT – III

Distributed operating systems: Introduction – the kernel – processes and threads – Naming and protection – communication and invocation – virtual memory. File service : components – design issues – Name service :Introduction – The SNS service model.

UNIT – IV

Shared data and Transactions: Introduction – conversion between a client and a server – Fault tolerance and recovery – Nested transactions. Distributed transactions : Introduction – simple distributed transactions & noted – atomic commit Protocols – concurrency control in distributed transactions – distributed deadlocks – transactions with replicated data.

UNIT – V

Security : Introduction – cryptography – Authentication & Key distribution – case study: Kerberos – Distributed shared Memory : Introduction – Design and implementation issues – sequential consistency and lvy – Release consistency and munin – other consistency models.

Text Book:

George coulouris, “Distributed Systems concepts and design”, Second Edition, “Jean Dollimore and Tim Kindberg. 1st Edition, 2000.