



# Principles of Distributed and Parallel Database Systems

## Introduction to Parallel DBMS

# Objectives

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Objective

Understand major parallel  
database architectures

# Different Types of DBMS ||-ism

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## | Intra-operator parallelism

- get all machines working to compute a given operation (scan, sort, join)

## | Inter-operator parallelism

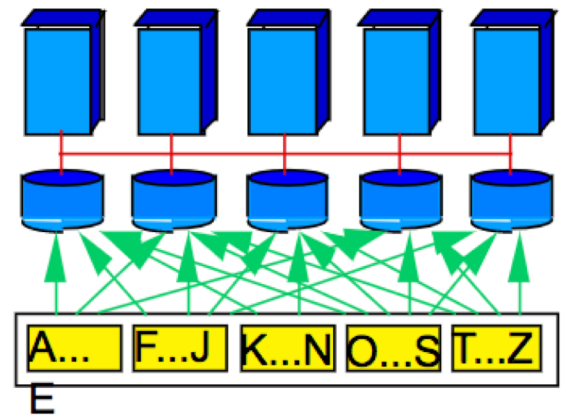
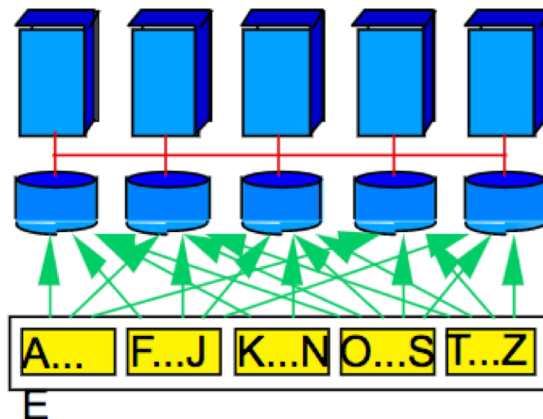
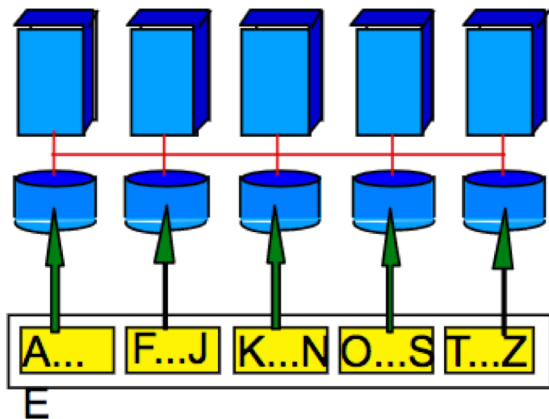
- each operator may run concurrently on a different site (exploits pipelining)

## | Inter-query parallelism

- different queries run on different sites

# Automatic Data Partitioning

## Partitioning a table: Range Hash Round Robin



# Partial Scans



| Scan in parallel, and merge.

| Selection may not require all sites for range or hash partitioning.

| Indexes can be built at each partition.