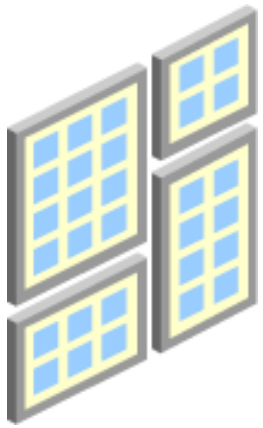
Postgrado en Inteligencia de Negocios

Ing. Fernando Terrazas A.

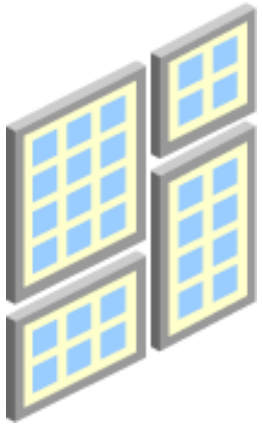
Partitioning Methods

- Edition Express
  - No partitions.
  - Size DB 2G.
- Standar Edition
  - No partitions.
- Enterprise Edition
  - Partitions.



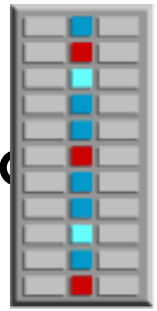
Partitioning Methods

- Range partitioning (Range in number, Range time , les than 10. les than 20 , les than)
- List partitioning (CountryCode = CO, BO, SV, PY)
- Hash partitioning (how many partitions do you want. 10 , ldw_customer)
- Composite partitioning
  - Composite range-hash partitioning
  - Composite range-list partitioning



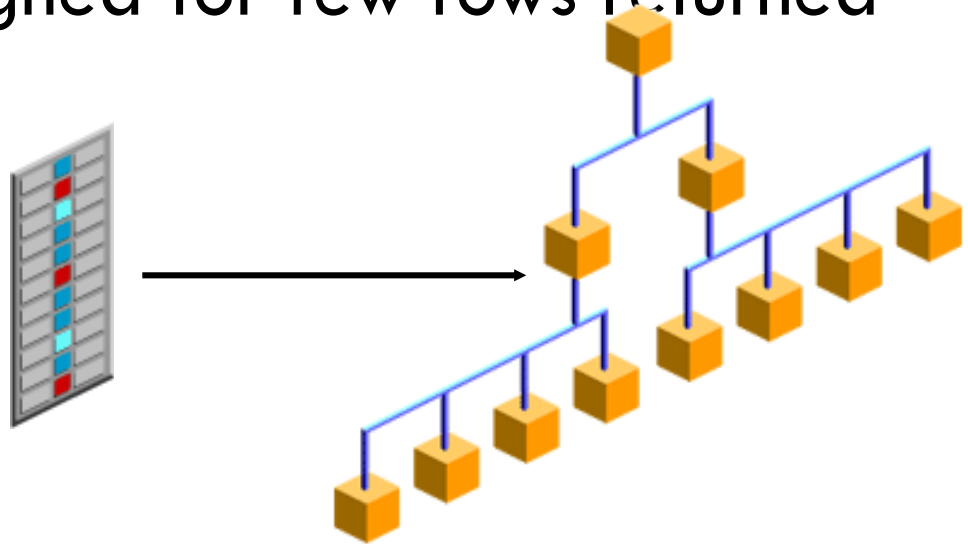
Indexing

- Indexing is used for the following reasons:
  - It is a huge cost saving, greatly improving performance and scalability.
  - It can replace a full table scan by a quick read of the index followed by a read of only those disk blocks that contain the rows needed.



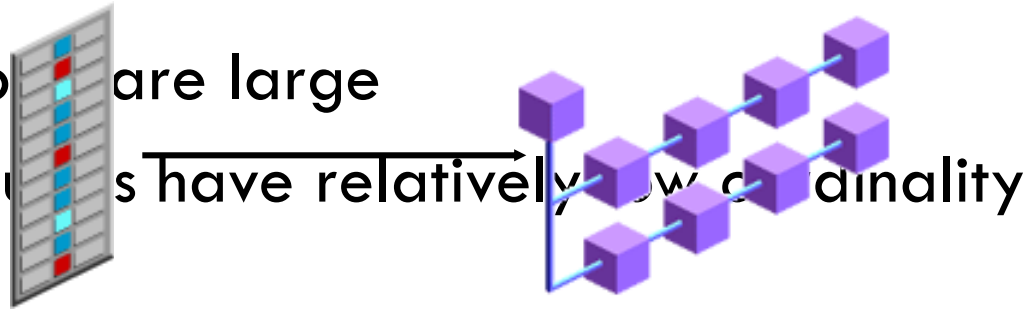
B-Tree Index

- Most common type of indexing
- Used for high cardinality columns
- Designed for few rows returned



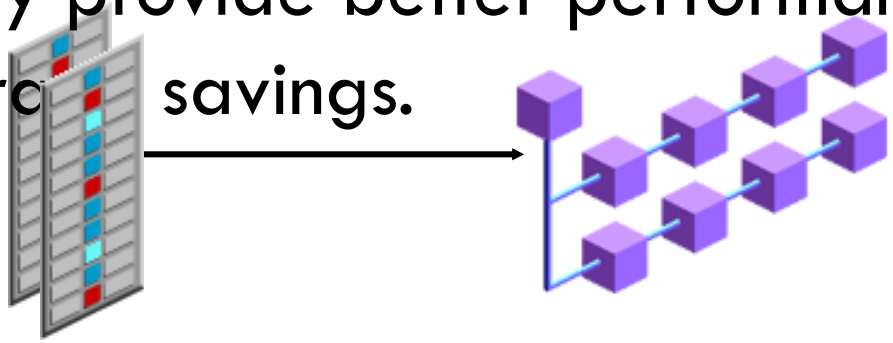
Bitmap Indexes

- Provide performance benefits and storage savings
- Store values as 1s and 0s
- Use instead of B-tree indexes when:
  - Tab[illegible]are large
  - Col[illegible]s have relatively [illegible]w c[illegible]dinality



Bitmap Join Indexes

- A bitmap index for the join of two or more tables:
  - They are new to Oracle9*i*.
  - They provide better performance and stora savings.



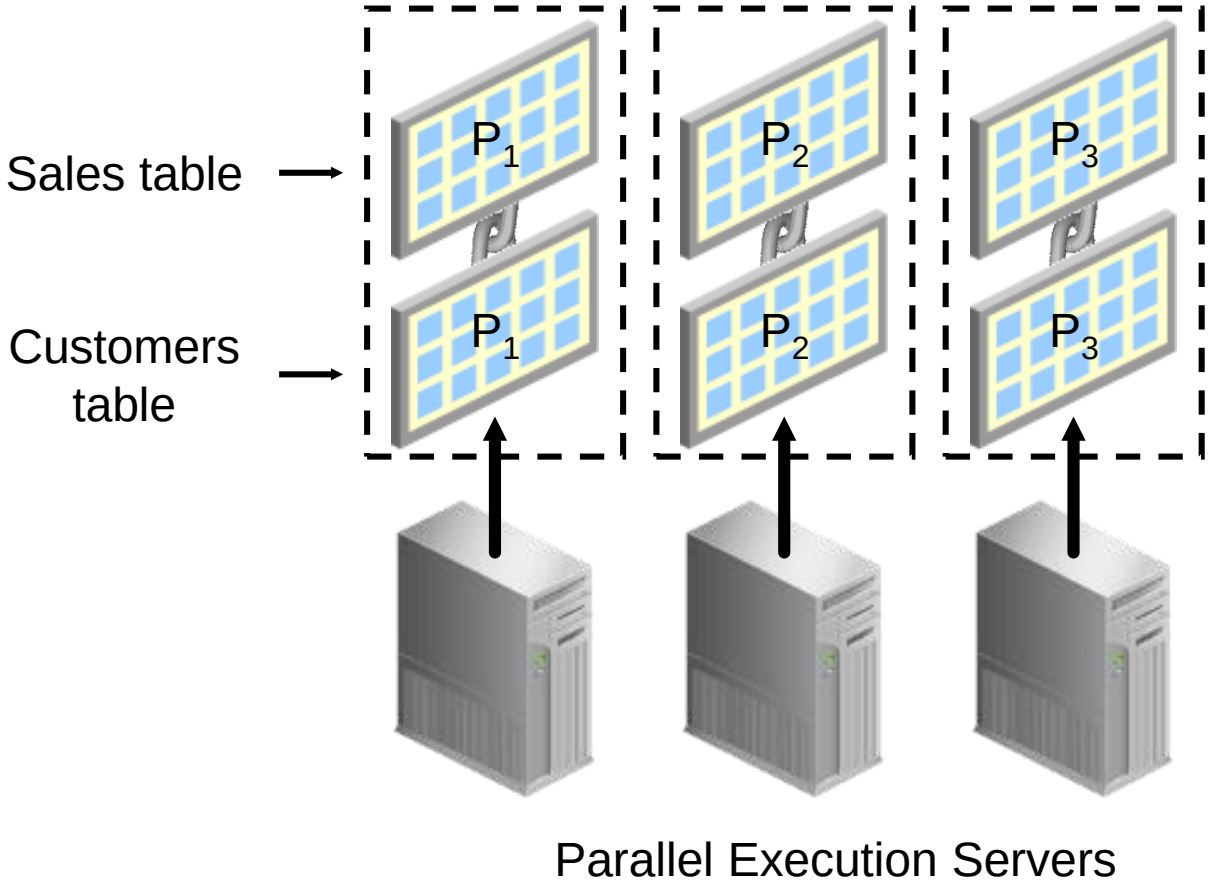
Star Query Optimization

- Star query optimization requires the following:
  - Tuning star queries
    - A bitmap index should be build on each of the foreign key columns of the fact table.
    - The initialization parameter `STAR_TRANSFORMATION_ENABLED` should be set to `TRUE`.
    - The cost-based optimizer should be used.
  - Using star transformation

Star Transformation

- A cost-based query transformation aimed at executing star queries efficiently
- Works well for schemas with a small number of dimensions and dense fact tables
- Oracle processes a star query by using two basic phases:
  1. The first phase retrieves exactly the necessary rows from the fact table (the result set).
  2. The second phase joins this result set to the dimension tables.

Parallelism



Using Summary Data

- Designing summary tables offers the following benefits:
  - Provides fast access to precomputed data
  - Reduces use of I/O, CPU, and memory

Conclusiones.

GRACIAS.