

OLAP SERVER ARCHITECTURES

ROLAP - Relational OLAP servers:

Client (front end) - ROLAP - Data sources (RDBMS)

Optimize SQL queries for analytics

May be using indices, materialized views, etc.

DSS server of Microstrategy, for example, adopts the ROLAP approach.

Greater scalability. (horizontal vs vertical)

MOLAP - Multidimensional OLAP servers:

Client (front end) - MOLAP - Data sources (RDBMS)

Array based multidimensional storage

Direct access $O(1)$

Arrays are limited to single memory; Scalability is less.

HOLAP - Hybrid OLAP servers:

It actually combines both approaches relational (ROLAP) and arrays (MOLAP).

- Scalability like ROLAP
- Faster Access like MOLAP

Microsoft SQL server 2000 (in older time) supported HOLAP.

p.s.

Specialized SQL servers

I.e. vertical storage and querying parallel (pipeline)