

TUTORIAL 3

Database Tuning

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Database tuning is the activity of making a database application run more quickly. Tuning is difficult because it requires global knowledge of an information system, from the hardware to the operating system to the transaction subsystem to the query language to the application. This tutorial will discuss the principles of tuning in a way that can be immediately applied. Some typical questions it will address are:

- 1) How much main memory should you buy?
- 2) What concurrency level of consistency should you use?
- 3) For what queries is a non-clustering index better than a clustering one?
- 4) How should you partition a hot table and its indexes across disks in read-intensive and write-intensive applications?

The tutorial will cover the following:

- Four general tuning principles
- Tuning the hardware, operating system, and transaction subsystem
- Choosing indexes
- Relational system tuning