



Chapter 3: Patterns (Part 1)

Subset Pattern

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Correct Option:

• The working set does not fit in memory and it is difficult to scale the hardware.

Incorrect Options:

• The system is running out of RAM.

Running out of RAM is likely not enough of a reason to change your schema. There could be other applications running on the system or some queries doing collection scans. The action should be to find the root cause of this issue first.

• The documents are too big.

The database can have large documents and operate perfectly, so long as there are not too many of them, or they are not used very often. The problem arises when there are many large documents, and they are part of the working set.

• The developers of the system have left and no one understands the application.

This means that doing any kind of maintenance is likely expensive. Doing a schema change that requires adding new collections and moving fields around may not be the right thing to do at this time. In this situation, you may want use money to solve the problem by using sharding to scale, if possible.

The system is accessing the disk too frequently.

This may be an indication that your working set does not fit in memory. However, there could be other causes, like doing unneccessary collection scans or having poor indexes. The action should be to find the root cause of this issue first.