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Who generates Big Data

- User generated content: social networks (web and mobile)
- Health and scientific computing
- Log files: web server log files, machine system log files
- Internet of Things (IoT): sensor networks, RFIDs, smart meters

Example of Big Data at work

Crowdsourcing

Sensing

Map data

Computing

Figure 1: Bigdata example

The five Vs of Big Data

- Volume: scale of data
- Variety: different forms of data
- Velocity: analysis of streaming data
- Veracity: uncertainty of data

• Value: exploit information provided by data

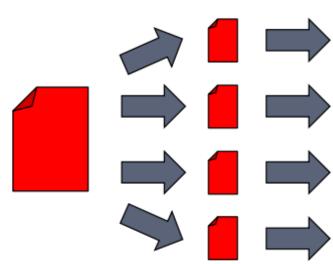
The bottleneck and the solution

Bottleneck

- Processors process data
- Hard drives store data
- We need to transfer data from the disk to the processor

Solution

- Transfer the processing power to the data
- Multiple distributed disks: each one holding a portion of a large dataset



• Process in parallel different file portions from different disks