

What's covered here?

- Monitoring Concepts



Goal of Monitoring

- How Database Server resources are being utilized when SQL code is running
 - CPU
 - Memory
 - Disk
 - Network Connection

Baseline

- Performance metrics gathered under normal circumstances
- Used as standard when monitoring

Objectives of Monitoring

- Why are we monitoring?
 - Establish baseline
 - Monitor data and database growth
 - Identify performance change over time
 - Diagnose specific performance problem

Monitoring Methodology

- Establish baseline
- Compare current metrics to baseline

Monitoring Tools

- Database Server
- Operating system
- 3rd party
- SQL

Sampling

- Capture relevant data
- The shorter the monitoring period, the higher the sampling frequency
- File size
- Performance consideration

Monitoring Efficiency

- Do we need centralized monitoring?
- Do we need management data warehouse?

A Good Monitoring Strategy

- Lists objectives
- Starts with establishing baseline
- Captures relevant data
- Is effective but less intrusive
- Chooses appropriate tools
- Is efficient
- Meet monitoring requirements

Troubleshoot Slow Running Queries

Some of the most common reasons for slow-running queries and updates are:

- Slow network communication
- Inadequate memory
- Out-of-date statistics
- Lack of useful indexes
- Inefficient storage

Denormalization

- Introduce redundancy in a controlled manner to improve performance
- Often sacrifice data flexibility
- May speed up retrievals but slow down updates