Monitoring SQL Server

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What is Monitoring?

- Essentially, monitoring is checking up on your servers on a periodic basis to ensure they are working as expected.
- Some things need to be monitored continuously, some hourly, some daily, some weekly, some monthly, etc.
- Unfortunately, SQL Server can't monitor itself. As the DBA, this is your job.

Why Monitor

- To be proactive so that you can:
  - Identify and fix small problems before they become big problems.
  - Identify problems as soon as they occur in order to keep your users online and productive.
  - Ideally, you will identify and fix problems before your users even know the problems exist.
- Being a proactive DBA is much less stressful than being a reactive DBA.

What Should You Monitor

- Hardware
- Overall Server Performance
- High Availability
- Operating System
- SQL Server Instance
- Database
- Documentation

Hardware Monitoring

- Is Physical Hardware Monitored (Software is often provided by vendor)
- Is I/O Subsystem (DAS, SAN) Monitored
- Is Free Disk Space % Monitored
- Is Physical Disk Fragmentation Monitored

Overall Server Performance Monitoring

- Is CPU Utilization Monitored
- Is Memory Utilization Monitored
- Is I/O Utilization Monitored
- Is Network Utilization Monitored

High Availability Monitoring

- Is Clustering Monitored
- Is Database Mirroring Monitored
- Is Log Shipping Monitored
- Are Database & Log Backups Monitored
- Are Offsite Backups Monitored

Operating System Monitoring

- Are Hardware Event Logs Monitored
- Are System Logs Monitored
- Are Application Logs Monitored
- Are Security Audit Failures Monitored
- Are Other Windows Logs Monitored
- Is Virtualization Monitored

SQL Server Instance Monitoring

- SQL Server Connectivity
- All SQL Server Services
- SQL Server Logs
- SQL Server Agent Jobs
- SQL Server Alerts
- Policy Violations
- Audit Events (Log or SQL Server Audit)

Database Monitoring

- Is Database Status Monitored:
- Are MDF and LDF Sizes Monitored:
- Is Blocking Monitored
- Are Deadlocks Monitored
- Is Query Performance Monitored
- Are Indexing Needs Monitored
- Is Database Corruption Monitored
- Is Replication Monitored

Documentation

- Is Server Documentation Monitored
- Is the Disaster Recovery Documentation Monitored

Best Ways to Monitor

- As much as possible, follow the principle of "management by exception".
- Manually use tools provided with SQL Server.
- Create your own monitoring system using T-SQL or PowerShell, and perhaps Reporting Services.
- Use a third-party tool, such as SQL Response.

E-books, websites, slides & more

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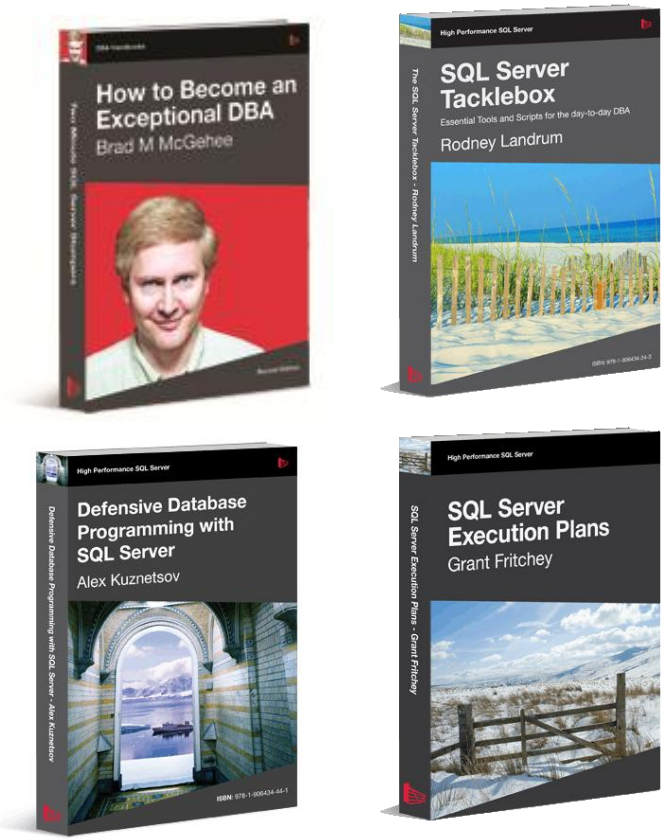

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