

SQL Server: Maintenance Plans

Module 3: Configuring SQL Server Agent Settings

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Introduction

- SQL Server Agent provides the ability to automate tasks through jobs containing one or more steps and schedules
- Configuring SQL Server Agent is an important task for monitoring job execution and receiving notifications when maintenance jobs fail
- SQL Server Agent is not included in SQL Server Express Edition

- In this module we'll cover:
 - Configuring Database Mail
 - Configuring SQL Agent Mail settings
 - Configuring SQL Agent History retention
 - Configuring SQL Agent Alerts

Configuring Database Mail

- Database Mail provides a solution for sending emails from inside of SQL Server using SMTP natively
- Database Mail is not active by default and requires configuration using Transact-SQL stored procedures or the Database Mail Configuration Wizard
 - Enable the Database Mail feature
 - Create a new mail profile
 - Add an SMTP account to the mail profile
 - Configure profile security
- Database Mail is included in SQL Server Express Edition but the wizard is not provided, requiring configuration using Transact-SQL stored procedures

Configuring SQL Server Agent Mail Settings

- **Multiple steps are required to fully configure SQL Server Agent to send email notifications after configuring Database Mail**
- **Create one or more Operators in SQL Server Agent**
 - Operators are aliases for individuals or groups that specify the contact information for sending notifications
- **The Alert System must be configured to enable email notifications through Database Mail in the SQL Server Agent Properties dialog**
 - The fail-safe operator can be configured as a security feature here
 - Changes require restarting the SQL Server Agent service to take effect
- **Configure job notification preferences**
 - Notifications are configured per SQL Server Agent job and can email an operator:
 - When the job succeeds
 - When the job fails
 - When the job completes

Configuring SQL Server Agent History Retention

- **SQL Server Agent maintains a history of job and job step executions**
- **The default configuration limits the size of the job history log to a maximum of 1000 rows with a limit of 100 rows for an individual job**
- **The defaults may result in job history information being cleared when one or more jobs exist that execute frequently**
 - **E.g. transaction log backups or replication agents**
- **Changing the maximum number of rows can help reduce the effects of one or more frequently executed jobs clearing the history of other jobs**
 - **Keep in mind this will increase the data stored in msdb and its size on disk**

Creating SQL Server Agent Alerts

- **SQL Server Agent can provide monitoring of important events or conditions using the alerts feature three different ways:**
 - Events in the Windows Application event log
 - SQL Server performance counters
 - WMI events
- **Alerts should be created for:**
 - Events with Severity ≥ 19 , which are high-severity errors that should be looked into
 - Error 825 read-retry errors

Summary

- Properly configuring SQL Server Agent for email notifications about job executions and problems is an essential part of setting up database maintenance for SQL Server
- The job history retention settings may need to be adjusted to prevent frequently-executing jobs from clearing the execution history of other important jobs in the system
- SQL Server Agent alerts should be configured for important errors and conditions where proactive notification should occur
- The next module will look at:
 - Common Maintenance Tasks