

SQL Server Specialist Certificate Program

Maintaining SQL Server 2005

**Week 9 – Class Project Presentations
SQL Server Agent**

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This Weeks Overview

- Review from Last Week
- Class Project Presentation
- SQL Server Agent
- Review and Homework

Topics from last week

- SSIS
- Partitioning
- TSQL

Class Project - Presentations

- You will have 5 to 10 minutes to present (more if needed)
- After the presentation there will be a question and answer time 5 to 10 minutes
- Presentations should include a hand out or a presentation that can be added to blackboard

Preparation

We will be using the AdventureWorks database.

1. SQL Server Agent

- SQL Agent is a scheduling engine to configure tasks or jobs to be run at a specific date or time
- Tasks can be recurring and scheduled to be run over and over again
- Built in as part of SQL Server so that you don't have to buy another application.
- More advanced than the Windows Task Scheduler

Creating a Scheduled Job

- Steps to Schedule a Job

1. Create a new job with a name, and owner
2. Add one or more steps to be run
3. Specify the schedule for this job

Create the Job

- Use The SQL Server Agent Node in the SSMS Object Explorer
- Use Categories to group types of tasks

Job Owner

- Only the job owner or members of the sysadmin role can modify a job
- For Transact SQL in jobs, the security context of the job is derived from the job owner

Add Steps to the Job

- Create the new step in SSMS
- Define the command
 - TSQL
 - Command line
 - SSIS Package
 - Many others
- Define the logging and notification
 - Output to file, table, others

Specify the Schedule

- The schedule determines when the job will be run
- You can attach one or more schedules to a job
- Schedules can be one time or recurring

Demo

Walkthrough the UI to schedule a job.

Lab Project

Create a job to backup AdventureWorks to a file

Schedule it to run every 3 minutes

Confirm that it is creating the file every 3 minutes

Once done, delete the schedule so that this does not continue to run continuously

- End of this section. Any Questions?

1. Maintenance Plans

- All maintenance plans are implemented as SSIS packages
- Each package can have only one schedule attached to it
- User interface to build jobs rather than just coding it
- Some plans may dramatically impact server performance

Some Types of Maintenance Plans

- Check database integrity
- Shrink database
- Reorganize Index
- Rebuild Index
- Update Statistics
- Backup Database
 - Full, Differential, or Transaction Logs
- Execute SQL Server Agent Job

Creating a Maintenance Plan

1. Specify the target server
2. Specify maintenance tasks to perform
3. Define task properties
4. Specify SSIS flow control
5. Create a schedule
6. Define logging options

Using the Maintenance Plan Wizard

- In SSMS, open the Management Node
- Right click on maintenance plans
- Choose maintenance plan wizard
- Follow the steps which may vary depending on the type of maintenance you select

Scheduling

- One Time
- On Demand
- Recurring
- Start when SQL agent starts
- Start whenever CPU becomes idle

Demo

- Walkthrough creating a maintenance plan

Lab Project

- Create a SQL Server maintenance plan to run a full database backup every 24 hours
- Create a SQL Server maintenance plan to run a Differential backup every 15 minutes

- End of this section. Any Questions?

Questions?