

SQL Server: Maintenance Plans

Module 6: Creating Maintenance Plans

Jonathan Kehayias

<http://www.SQLskills.com/blogs/jonathan/>
Jonathan@SQLskills.com



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hardcore developer training

Introduction

- **Maintenance Plans can be configured using multiple methods in SQL Server each with different limitations and benefits**
 - The Maintenance Plan Wizard simplifies configuring core maintenance tasks in SQL Server Management Studio along with SQL Agent Job schedules
 - The Maintenance Plan Designer allows more complex configurations for maintenance tasks in SQL Server Management Studio along with creating SQL Agent jobs appropriately
 - SQL Server Integration Services (SSIS) packages allow for creation of Maintenance Plan packages that can be reused but doesn't create scheduled jobs in SQL Agent automatically
- **In this module we'll cover:**
 - Maintenance Plan Wizard Introduction
 - Maintenance Plan Designer Introduction
 - SQL Server Integration Services Introduction
 - Options to simplify Maintenance Plan reuse

Maintenance Plan Wizard Introduction

- **Good for creating simplified maintenance configurations across multiple databases but is limited to a single configuration for each of the available tasks**
- **Allows for a single SQL Agent Job schedule or separate SQL Agent Jobs to be scheduled per task**
 - Order of tasks only matters when a single schedule is used for all tasks otherwise the individual task schedules determine the order of execution
- **Multiple plans can be created for database specific customizations but can also increase the management overhead as a result**
- **The Wizard can be used to initially create a basic maintenance plan but modifications of a plan requires an understanding of the designer**
 - It is possible to export the associated SSIS package created by a maintenance plan for modification, and script the SQL Agent Jobs associated with a plan created by the wizard to produce a redeployable solution

Maintenance Plan Designer Introduction

- **Used for all modifications of Maintenance Plans, even those created by the Maintenance Plan Wizard**
- **Provides significantly more customization than the wizard in a single plan configuration**
 - Multiple copies of the same task with different configurations
 - Parallel configuration of tasks to execute concurrently
 - Multiple sub-tasks within a single plan with different schedules
 - Access to tasks not available within the wizard
 - Configuration of separate workflows for task failure, success or completion
 - Multiple connection configurations within a single task
 - Multiple notification and reporting configurations are possible to fit requirements within a single plan
- **Automatically creates SQL Agent Jobs with schedules based on the sub-plan configurations defined in the designer**
 - Manages changes to SQL Agent Jobs as necessary

SQL Server Integration Services Packages

- **Similar to the designer layout for available options for individual tasks**
- **Allows local storage of the package for deployment across multiple servers to simplify configuration management in large enterprises**
- **Does not create SQL Agent Jobs to schedule automatic execution of packages, requiring manual scheduling for servers where packages are deployed**
 - SQL Agent Job schedules can still be scripted within SSMS for reuse once created on a single server in most cases

Options to Simplify Maintenance Plan Reuse

- **Create a generic Maintenance Plan using the wizard or designer to meet most of the common requirements**
 - Creates a SSIS package stored in the msdb database for the Maintenance Plan definition
 - Creates SQL Agent Jobs and schedules to execute the pre-defined tasks based on requirements
- **Export the SSIS package from the msdb database for customization**
- **Script the SQL Agent Jobs associated with the Maintenance Plan**
 - Customization may be necessary based on instance names and Job Server associated with the jobs
- **Redeploy the SSIS packages using dtutil to additional servers**
- **Create the necessary SQL Agent Jobs to schedule automated execution of the Maintenance Plan tasks on multiple servers**

Summary

- The Database Maintenance Wizard is good for creating simplified maintenance configurations across multiple databases but is limited to a single configuration for each of the available tasks
- The Maintenance Plan Designer allows for customization of Maintenance Plans previously created by the wizard while also allowing fine grained configuration of maintenance tasks within a single plan when required
- SSIS packages underlie all Database Maintenance Plans, and can be a simplified method of deploying a single maintenance configuration across multiple servers in an enterprise
- The next module will look at:
 - Maintenance Plan challenges and alternatives