Manage Your Shop with Policy Based Management & Central Management Server

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Objectives

- CMS Configuration

- CMS Import and Export

- Policy Creation

- Policy Evaluation

- Alerts

- Reporting

Central Management Server

CMS stores connection information for all your SQL servers in one central location.

It's just like registered servers but is housed in MSDB

Requirements

- Must be on a SQL 2008 Instance

    - All editions are supported including Express

    - You can register SQL 2000 and 2005 instances

- Security managed by two MSDB database roles

    - ServerGroupAdministratorRole

        - Allows management and configuration of the CMS

    - ServerGroupReaderRole

        - Allows connect and read to the CMS

Advantages

- ✓ Connection repository that all your admins can use

- ✓ Allows you to run a query against multiple servers simultaneously

- ✓ Allows you to group servers logically. Examples are by function, geographic location, or version

- ✓ Allows you to evaluate PBM policies against groups of servers

Disadvantages

- The CMS server cannot be a part of its own group
  - Workaround is to use 127.0.0.1 or an FQDN

- Registered servers can only use Windows authentication. Why is this a disadvantage?

Import and Export

Import your locally registered servers

Export servers from your CMS groups

Export are stored in XML format

- Exporting Local Connections

- Windows Authentication

  - Username and password are not exported

- SQL Authentication

  - Username exported, and password exported as hashed

Jump In !!

DEMO

Policy Based Management

Gives us centralized management of our SQL Servers

Allows us to evaluate, configure, and enforce standards across the enterprise.

Requirements

- SQL Server 2008 Standard, Enterprise, or Developer

  - You can evaluate policies against SQL 2000 and 2005 instances, but SQL 2008 is required for the policy server

- MSDB

Terminology

- Facet

- Condition

- Policy

- Target

- Server Restriction

- Category

Creating Policies

Manual Policy Creation

- GUI
    - Create a check condition
    - Create a policy
        - Define check condition created in previous step
        - Define target condition
        - Define evaluation mode
        - Define server restriction condition
- T-SQL
    - dbo.sp_syspolicy_add_condition
    - dbo.sp_syspolicy_add_object_set
    - dbo.sp_syspolicy_add_target_set
    - dbo.sp_syspolicy_add_target_set_level
    - dbo.sp_syspolicy_add_policy

Creating Policies

Import

- Import policies exported from other servers
- Import Microsoft best practice policies
  - %installdir%\100\tools\policies\databaseengine\1033

- Option – Replace duplicates with items imported
- Option – Policy state
  - Preserve state
  - Enabled
  - *** Disabled ***

Policy Evaluation

- Evaluation Modes

  - On Demand

  - On Schedule

  - On Change: Log Only

  - On Change: Prevent

Policy Evaluation

- Methods
  - Evaluate a single policy against a single instance
  - Evaluate multiple policies against a single instance
  - Evaluate a single policy against multiple instances
  - Evaluate multiple policies against multiple instances

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Alerts

- Requirements
  - Database Mail
  - Operators
  - Enable alert system notifications in SQL Agent
  - Policy must be enabled to raise an alert

- PBM Error Numbers
  - On Change: Prevent (automatic) – 34050
  - On Change: Prevent (on demand) – 34051
  - On Schedule – 34052
  - On Change - 34053

Reporting

Enterprise Policy Management Framework is an open source reporting project for PBM available on CodePlex.com

- Requirements
  - SQL 2008 SP1 CU3
  - PBM
  - CMS
  - PowerShell
  - Management Database
  - SQL Reporting Services

- Setup
  - SQL script to create the database
  - PowerShell script to evaluate policies against CMS
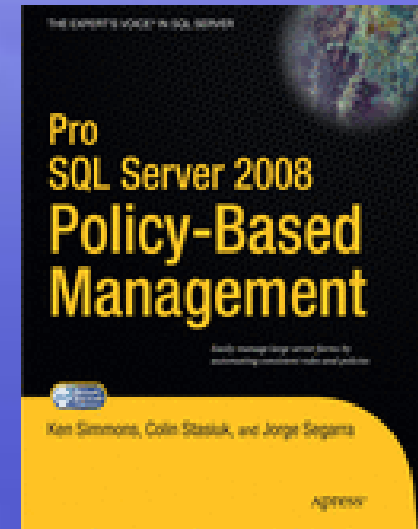 - BIDS reporting project

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Use Cases

Disable Auto Shrink	Authentication Mode	SQL Password Expiration
SQL Password Policy	Guest Permissions	Last Backup Time
Auto Grow	Auto Create Statistics	Auto Update Statistics
Enforce Naming Convention	DB Compatibility Level	Recovery Model
Encryption	Is Trustworthy	Login Auditing
Enable Database Mail	Disable SQL Mail	Backup Compression
SQL Agent Running	Agent Jobs Notify on Failure	Monitor SQL Agent Jobs
Transaction Log Backups	Disable xp_cmdshell	

Summary

- CMS Configuration

- CMS Import and Export

- Policy Creation

- Policy Evaluation

- Alerts

- Reporting

Resources

- Pro SQL Server 2008 Policy-Based Management

- Ken Simmons
  - Twitter – @KenSimmons
  - Web – CyberSQL.blogspot.com
- Colin Stasiuk
  - Twitter - @BenchmarkIT
  - Web – BenchmarkITConsulting.com
- Jorge Segarra
  - Twitter - @SQLChicken
  - Web – SQLChicken.com

Slides
http://www.ryanjadams.com/2011/01/pbm-cms/

Speaker Rate
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QUESTIONS?