Policy Based Management

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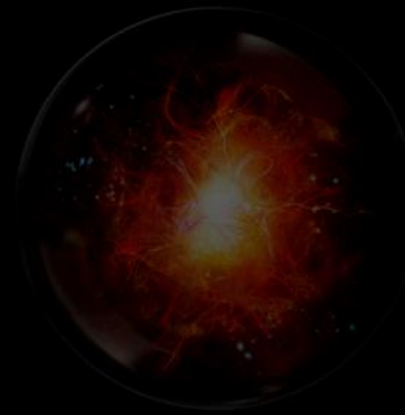
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Agenda

- What is Policy Based Management & it's Need

- Objects of PBM

- Architecture

- Demo

- EPM Framework

- Considerations

- Questions

What is PBM & Needs

- Reduce DBA efforts

- Central Management is easier now

- Enforcing policies across all servers (low versioned)

- Notify or block when policies gets violated

- Evaluating Policies periodically

- Capable to handle old versions (>= SQL 2000*)

**Not all facets \ condition applicable on < SQL2008

Objects of PBM

- Facets
- Conditions
- Policy Targets
- Policies
- Policy Categories

Objects of PBM   contd...

- Facets
  - Logical Property or Characteristics of targets
  - 74 facets available in SQL2K8 and 82 facets available in SQL2K8 R2
  - All facets can be queried using dbo.syspolicy_management_facets view in msdb database
  - User defined facets are not allowed

Objects of PBM   contd...

- Conditions
  - Boolean Expression to evaluate the targets
- Policy Targets
  - Endpoint where we are going to evaluate policies
  - Server Instance, Database, Database objects etc
- Policy Categories
  - User defined one to organize your policies for easy administration
  - A policy can be assigned to only one category
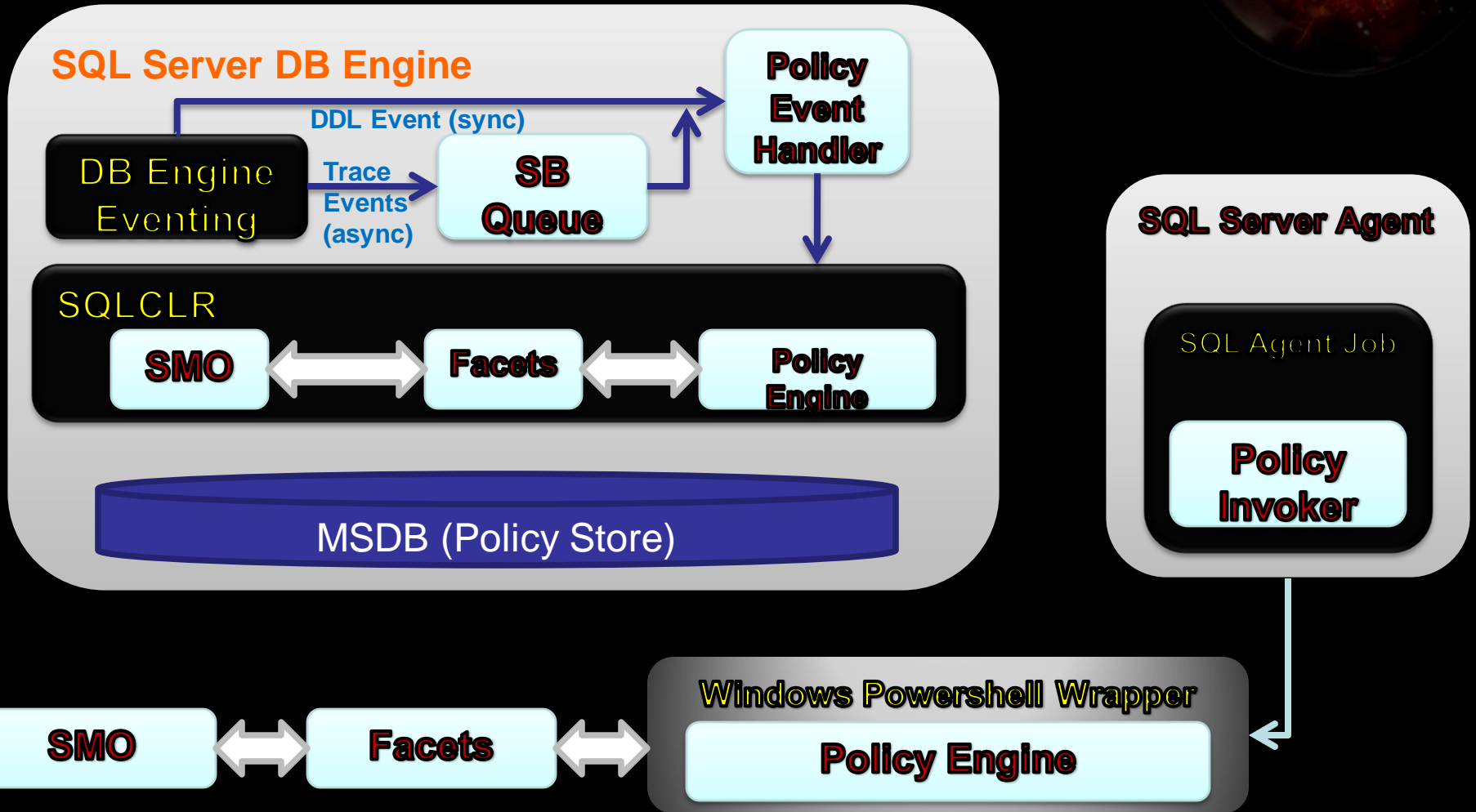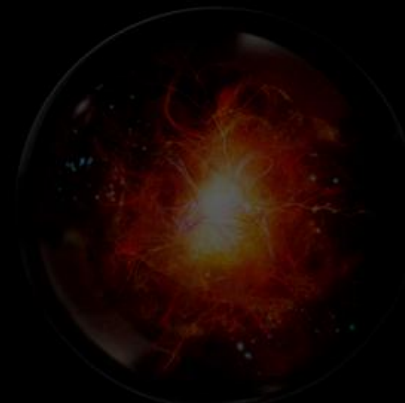
Objects of PBM   contd...

- Policies
  - Contains a condition to evaluate against targets
  - Can be enabled or disabled
  - Evaluated in 4 modes
    - On Demand
    - On Change : Log only
    - On Change : Prevent
    - On Schedule

Permission for PBM

- A new role "PolicyAdministratorRole" is added to msdb database.

- Complete privilege for PBM, users can create \ edit policies

- User has elevated access for creating server level triggers

- User has access to ExecuteSql or ExecuteWql functions.

- Scheduled policies will run under SQL agent service account

Chennai SQL Server User Group - www.chnsqlug.co.cc

Architecture

SQL Server DB Engine

DB Engine Eventing

DDL Event (sync)

Trace Events (async)

SB Queue

Policy Event Handler

SQLCLR

SMO ⟷ **Facets** ⟷ **Policy Engine**

MSDB (Policy Store)

SQL Server Agent

SQL Agent Job

Policy Invoker

Windows Powershell Wrapper
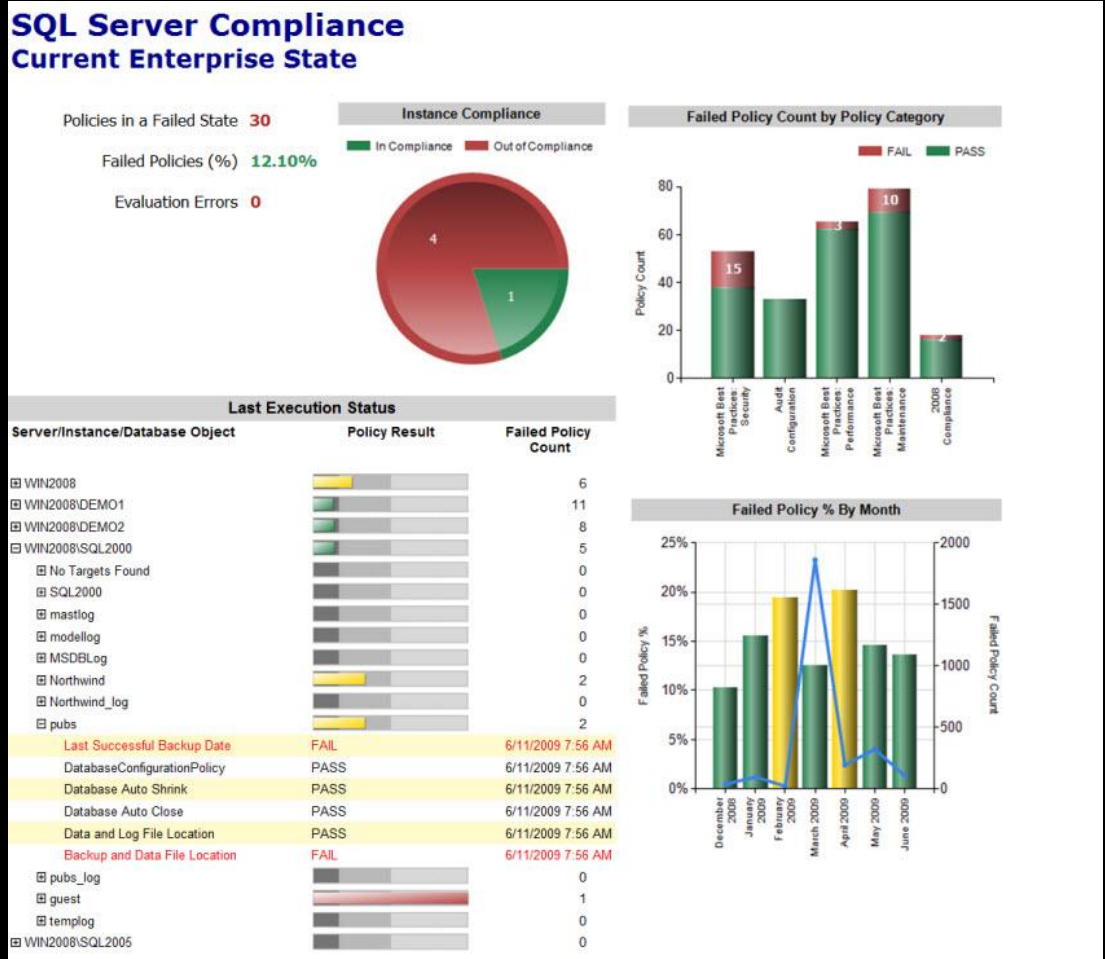
Policy Engine

SMO ⟷ **Facets** ⟷

Demo

- Demo 1 - Creating a policy

- Demo 2 - Evaluate by On Demand and On Change

- Demo 3 - Evaluate policies across multiple server using CMS

- Demo 4 - Import \ Export Policies

- Demo 5 - Configuring Mail Alerts for policy violations

EPM FrameWork

- Requires SQL 2008 SP1 with Cu3

Considerations

- Some policies might affect to fail because of improper use

- If nested trigger option is disabled then On Change : Prevent only evaluation mode cannot be used

- PolicyAdministratorRole has elevated access to Server level trigger creation

Questions

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