SolidQ

Security Essentials for SQL Server 2008 R2 & SharePoint 2010 BI

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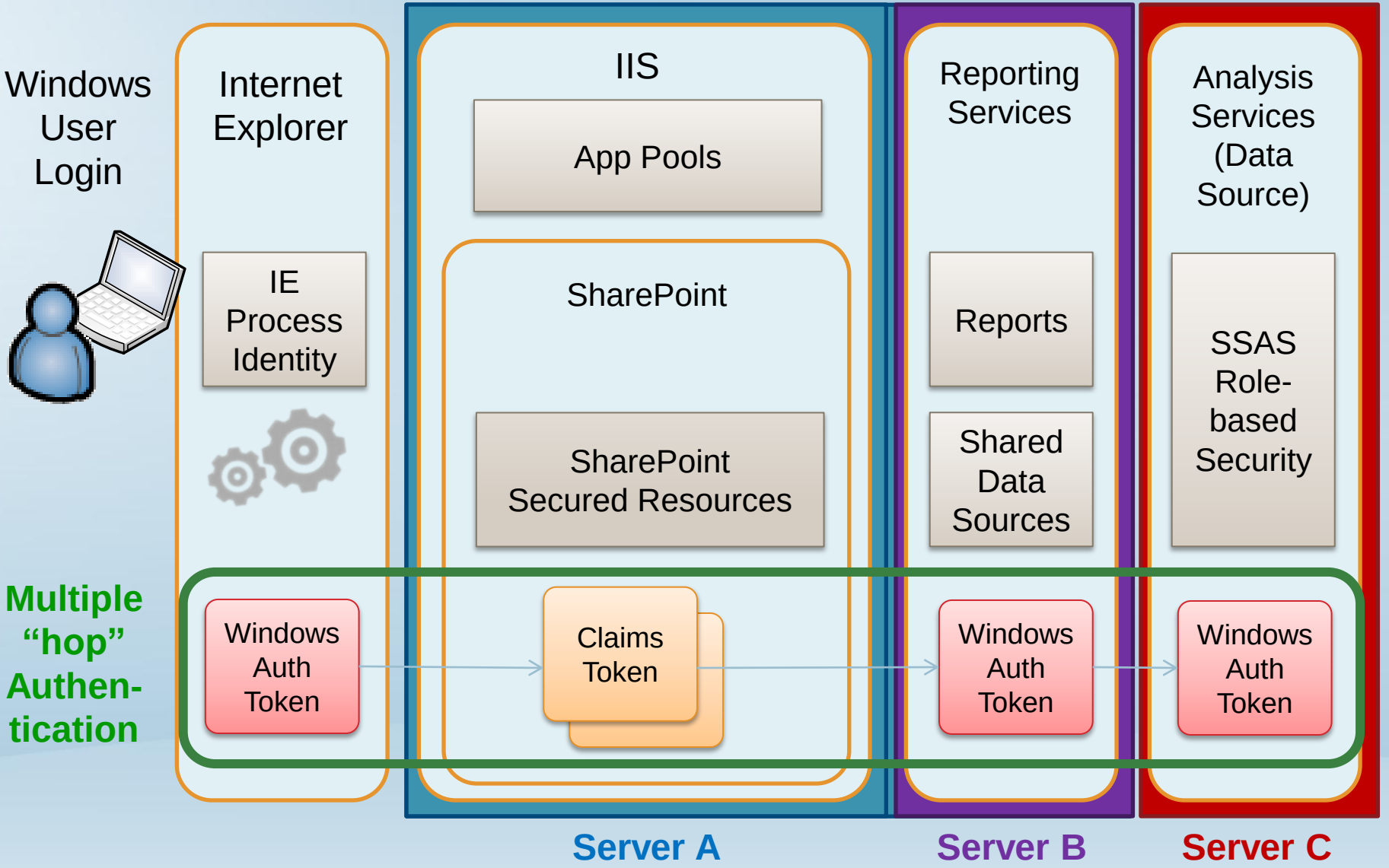
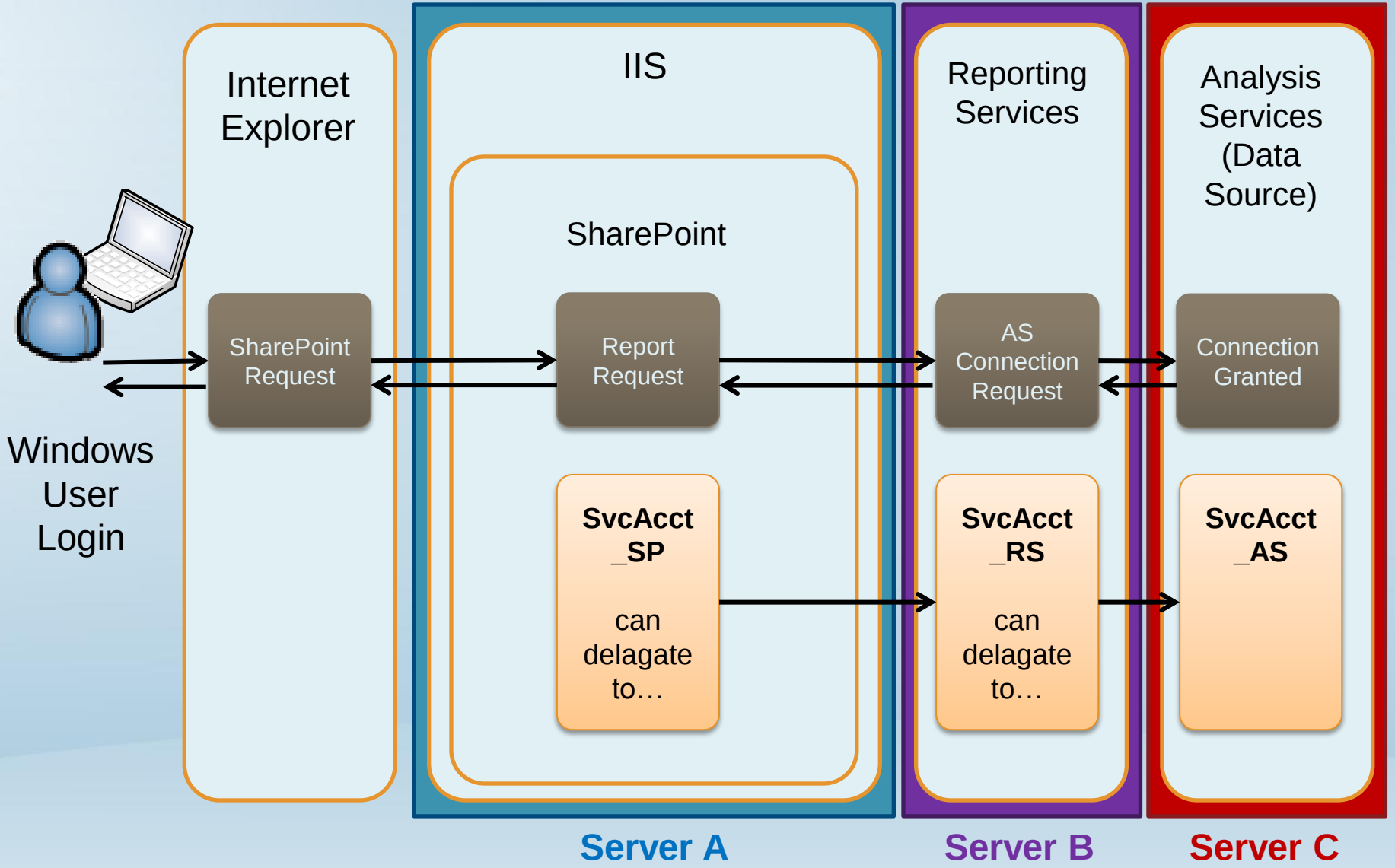
SqlServerBiBlog.com

Authentication Boundaries



Service Accounts & Delegation



Configuration Steps

- Plan hardware & services architecture
- Plan service account assignments
- Create accounts
- Configure Claims to Windows Token Service
- Add service principal names
- Configure delegation
- Add data sources

Kerberos & Constrained Delegation

- Configuring Kerberos is uncomplicated if you get it right the first time
- Make checklist and validate each step
- T A K E Y O U R T I M E
- Troubleshooting & fixing can be more complicated than starting over

Services & Principals

- SharePoint
- SQL Server
- Analysis Services
- PowerPivot for SharePoint
- Excel Services
- Reporting Services
- Claims-to-Windows Token Service

Demonstration

- Introduce server environment
- Services running on each server:
  - Domain controller
  - SQL Server
  - Analysis server (on SQL server in demo)
  - SharePoint farm server
  - Report server (SP, SSRS & PowerPivot in demo)
  - Windows client

Create Domain Service Accounts

- Each service will impersonate a user with another service
- One principal for each service or app pool (production)
- Consolidate (for dev/demo environments)

Service Principal Names

- Syntax:
  setspn –S <service name> <principal name>
- Set a SPN for both the principal fully-qualified & NetBIOS name

```
C:\>SetSPN -S http/Teams vmlab\svcTeamsApp

Checking domain DC=VMLab,DC=local
CN=svcTeams10App,OU=014,OU=Service Accounts,DC=VMLab,DC=local
        HTTP/Teams.vmlab.local
        HTTP/Teams
```

Service Names for SPNs

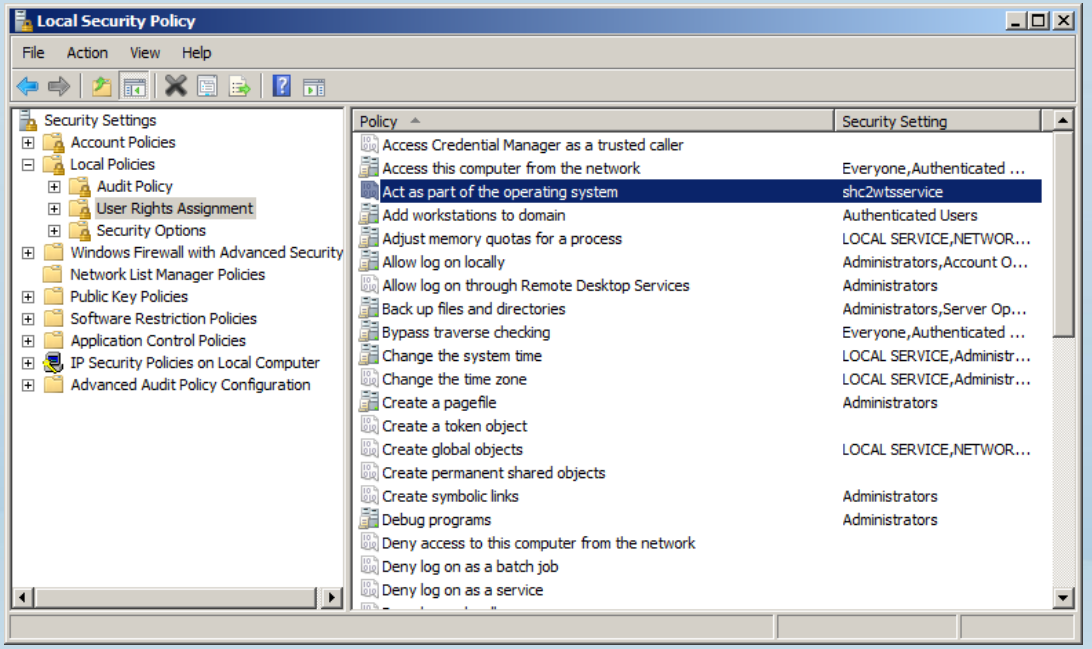
SharePoint	http/<hostname>
SQL Server (relational)	mssqlservice/<server>:1433
Analysis Services	msolapsvc.3/<server>
Reporting Services	sp/reportservice
PerformancePoint	sp/performancepointservice
Excel Services	sp/exelservices
PowerPivot	sp/powerpivotservice
Claims to Win Token Svc	sp/claimstowindowstokenservice

Demonstration

- Create domain managed service accounts
- Create service principal names
- Validate SPNs

Configuring Claims to Windows Token Service

- Runs on every machine running a SharePoint managed service
- Uses local service account by default
- Change to run as a domain account in the local administrator group
- Set local policies:
  - Act as part of the operating system
  - Impersonate a client after authentication
  - Log on as a service



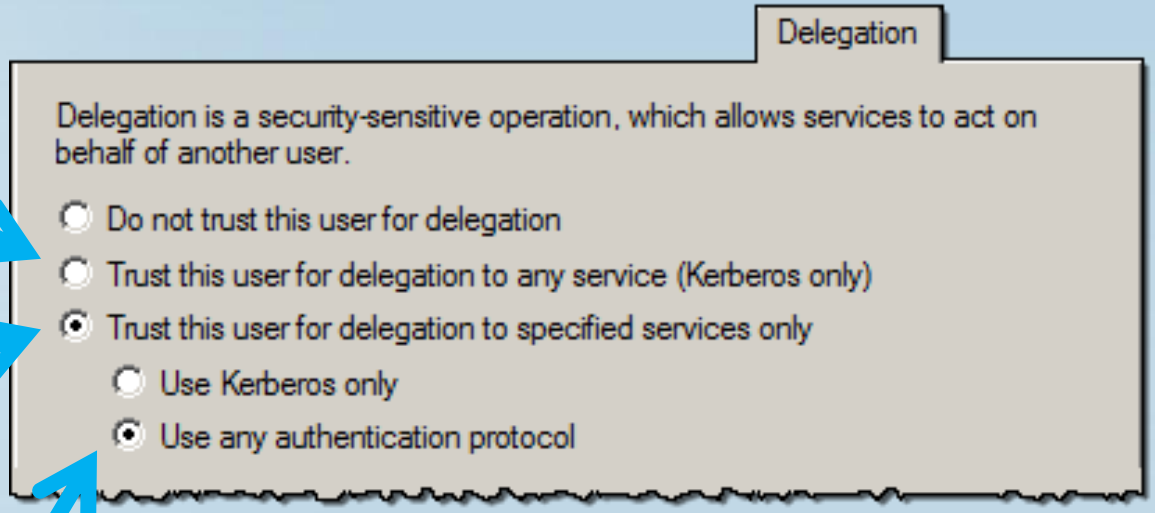
Demonstration

- Check Claims to Windows Token Service in SharePoint server
- Set local security policies

Delegation Options

Basic Delegation
Not supported in most SQL Server 2012 scenarios

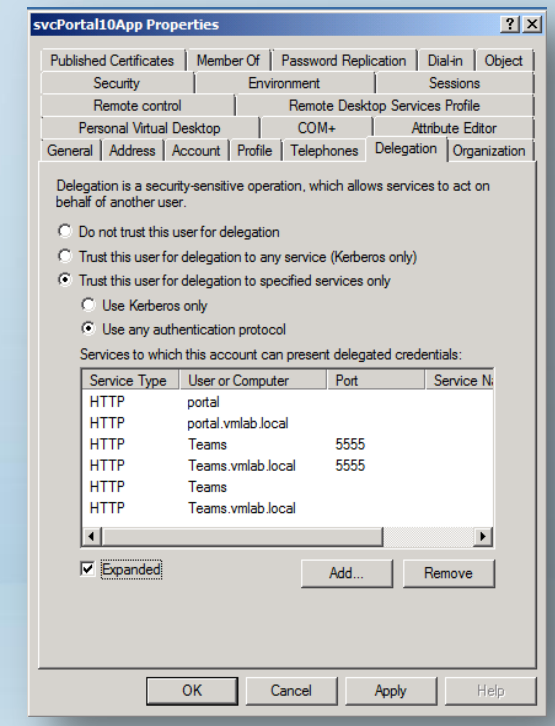
Constrained Delegation
Recommended

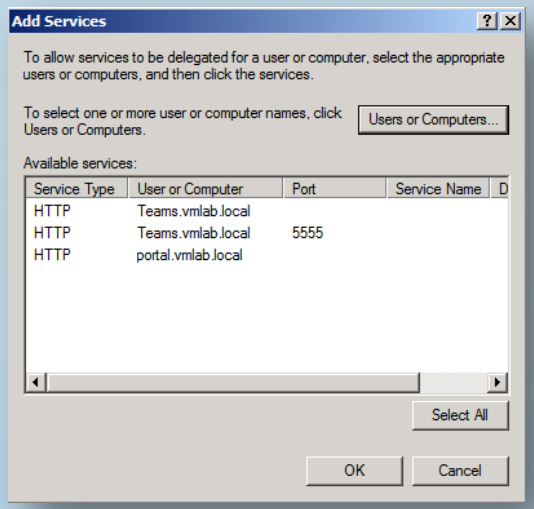


- Claims
- Kerberos
- NTLM

Constrained Delegation

- Tells OS to trust user for delegation to a list of specific services
- After SPN created, shows Delegation tab on AD User dialog





Demonstration

- Configure constrained delegation
- Verify SPNs with Delegation tab
- Delegate services in the reference chain
- Assign service accounts to each service
- Restart all services

Troubleshooting

- Watch out for caching
  - Changes may not be applied right away
  - Error conditions may persist
  - No silver bullet method to clear cached settings
- Reboot after changes (if no effect)
- Use SQL Server Profiler trace to check for account names & connection events

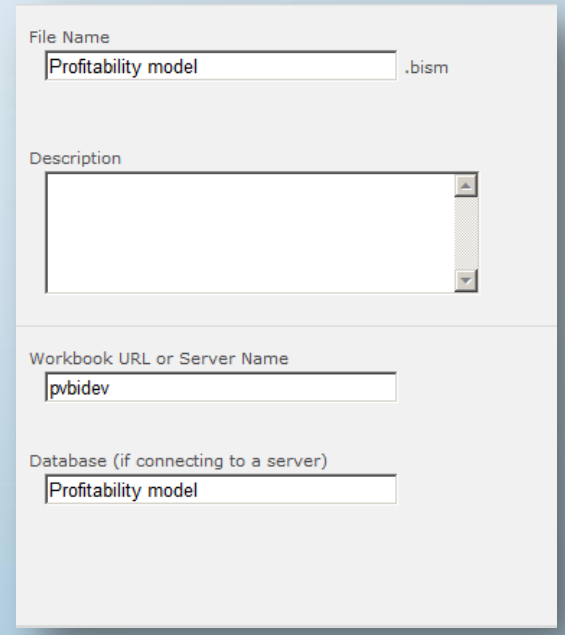
Installing Servers & Software

- SQL Server 2008 R2 or 2012
  - Relational instance
  - Reporting Services integrated mode
- SharePoint Server 2010 Enterprise
  - Software prerequisites (lots of prerequisites - read carefully & follow directions)
- SharePoint 2010 Service Pack 1
  - Don’t run farm configuration if planning PowerPivot
- PowerPivot for SharePoint Configuration Tool
- Central Administration Product Wizard

Connection Options

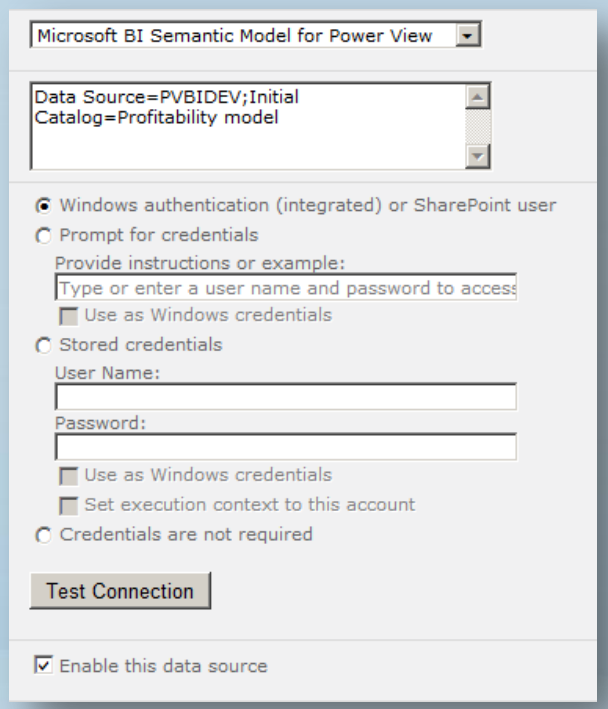
BISM Connection file

- Simple
- Specialized



RSDS report connection

- Flexible



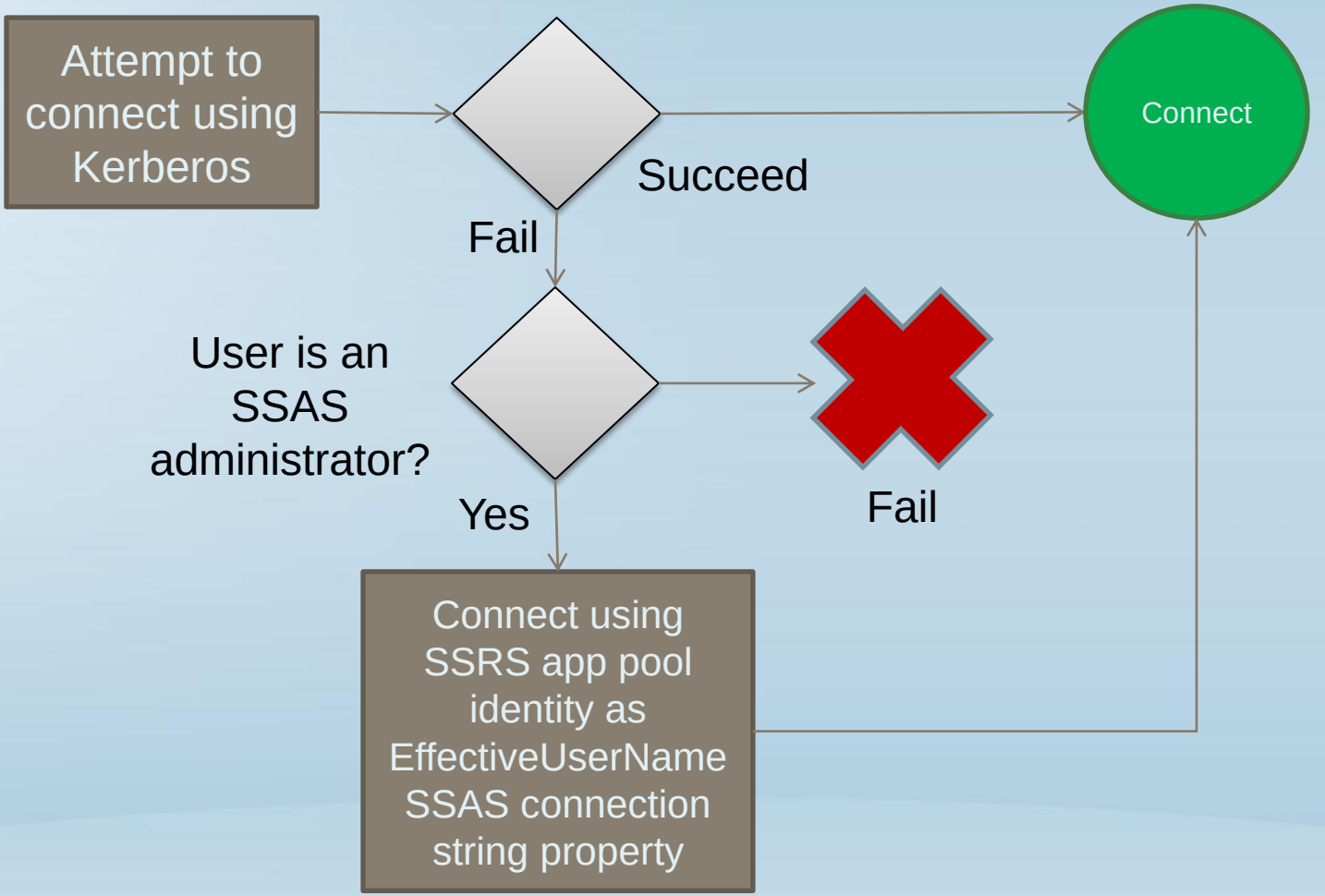
BISM Connection File

- Only connects to a tabular data source
- Use the URL for a .bism file in a connection string in place of the server name for any SSAS client
  - Uses EffectiveUserName

RSDS Connections

- Natively used by Reporting Services
- Can be used by Power View
- Credential options:
  - Windows authentication
  - Prompt for credentials
    - not supported by Power View
  - Stored Credentials
    - Always check Use Windows credentials for SSAS sources
    - Set execution context (passes user name in EffectiveUserName property)

Connection to SSAS with a BISM Connection File



Demonstration

- Open SQL Server Profiler & start trace
- Navigate SharePoint site
- Explain service interaction, token-passing & delegation
- Analyze trace & observe delegated connections

The Comprehensive Reference

- SQLCAT.com
- 244 pages of pure bliss

Microsoft

Microsoft® SharePoint®

Configure Kerberos Authentication for SharePoint 2010 Products

Microsoft Corporation

Published: July 2010

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Abstract

This document gives you information that will help you understand the concepts of identity in Microsoft SharePoint 2010 Products, how Kerberos authentication plays a very important role in authentication and delegation scenarios, and the situations where Kerberos authentication should be used or may be required in solution designs. Scenarios include business intelligence implementations which secure access to external data sources such as SQL Server. The document also shows how to configure Kerberos authentication end-to-end within your environment, including scenarios that use various service applications in Microsoft SharePoint Server. Additional tools and resources are described to help you test and validate Kerberos configuration.

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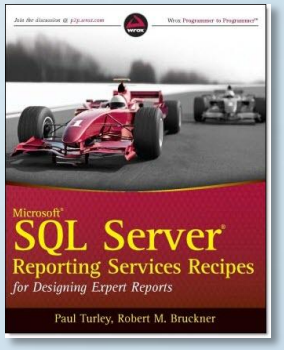
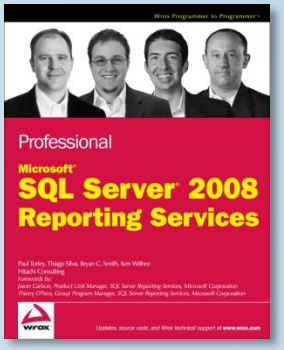
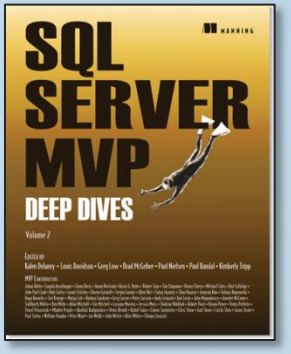
Thank You







Resources

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