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Tech•Days Hong Kong 2010 – In Touch

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Exchange Server 2010 SP1 Tips and Tricks

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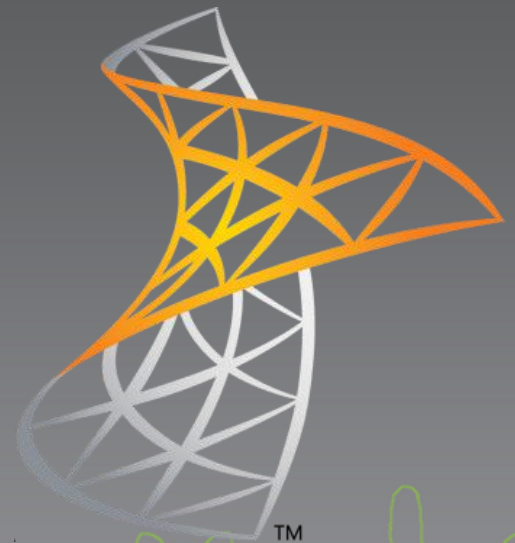
Agenda

- The Basics
- Planning and Deployment Tools
- Setup and Deployment
- Mailbox and Public Folder Databases
- Other SP1 Improvements



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Exchange Server 2010

THE BASICS



Exchange Server 2010...

- RTM'd October 8, 2009
- GA since November 9, 2009
 - Downloadable from Microsoft Download Center
<http://www.microsoft.com/downloads/details.aspx?displaylang=en&FamilyID=05741f65-2a7b-4070-879f-d74208d6171d>
 - 64-bit only



Exchange Server 2010 SP1...

- Signed off for RTM on August 23, 2010
- RTW at 9:00 AM PST on August 25, 2010
- Available for download at
<http://go.microsoft.com/fwlink/?LinkID=199950>
- Build no. 14.01.0218.015
- Supporting more languages than ever before
 - Unified Messaging languages: 25
 - Client languages: 55
 - Server languages: 15
- Hosting more than 45 million mailboxes in the cloud!

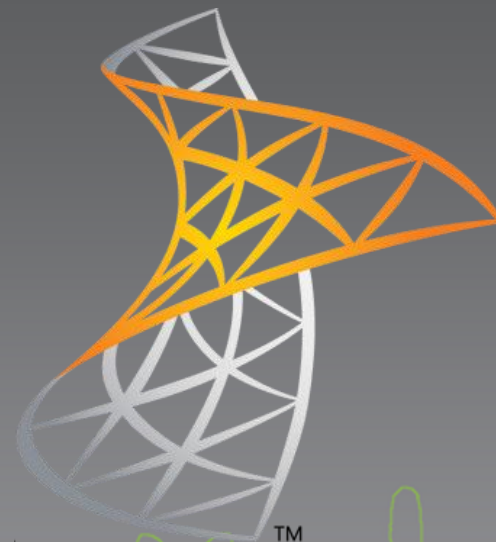


Exchange Server 2010 SP1...

- Available in three Server Editions
 - Standard Edition (retail and volume)
 - MPC: 0264-385
 - Enterprise Edition (volume only)
 - Includes all Exchange 2010 Standard features, plus support for up to 100 databases per server
 - MPC: 0264-2871
 - Coexistence Edition (volume only)
 - This is a Standard Edition SKU designed to be a "gateway" for upgrading from previous versions of Exchange to Exchange 2010 Online
 - MPC: 0264-2942 (offered for free)

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Exchange Server 2010

**PLANNING AND
DEPLOYMENT TOOLS**



Exchange Server Pre-Deployment Analyzer

- <http://msexchangeteam.com/archive/2010/02/24/454083.aspx>
- Focuses on overall topology readiness
- Performs analysis of Exchange 2003/2007
- Supported on Windows 7, Windows Vista SP2, Windows Server 2008 SP2, Windows Server 2008 R2, and Windows Server 2003 SP2



Exchange Server Deployment Assistant

- <http://technet.microsoft.com/en-us/exdeploy2010>
 - Upgrade from Exchange 2003
 - Upgrade from Exchange 2007
 - Upgrade from Exchange 2003/2007
 - New Exchange 2010 Org



Exchange Profile Analyzer

- Latest version - 08.03.0056
- Collect estimated statistical information from a single mailbox database or an Exchange organization
- Download from
<http://www.microsoft.com/downloads/en/details.aspx?FamilyId=8F575F60-BD80-44AA-858B-A1F721108FAD&displaylang=en> (32-bit) or
<http://www.microsoft.com/downloads/en/details.aspx?familyid=C009C049-9F4C-4519-A389-69C281B2ABDA&displaylang=en> (64-bit)

Mailbox Server Role Requirements Calculator

- <http://msexchangeteam.com/archive/2009/11/09/453117.aspx>
 - User profile
 - High availability architecture
 - Server's CPU platform
 - Storage architecture
 - Backup architecture
 - Network architecture



Exchange Jetstress 2010

- Latest version - 14.01.0225.017
- Simulate disk I/O load on a test server running Exchange to verify the performance and stability of your disk subsystem before putting your server into a production environment
- Download from
<http://www.microsoft.com/downloads/en/details.aspx?displaylang=en&FamilyID=13267027-8120-48ed-931b-29eb0aa52aa6> (64-bit) or
<http://www.microsoft.com/downloads/en/details.aspx?FamilyID=6c9c1180-4dd8-49c4-85fe-ca1cdcb2453c> (32-bit)

Exchange Load Generator 2010

- Latest version - 14.01.0180.003
- Simulation tool used to measure the impact of MAPI, OWA, ActiveSync, IMAP, POP and SMTP clients on Exchange servers
- Download from
<http://www.microsoft.com/downloads/en/details.aspx?FamilyID=cf464be7-7e52-48cd-b852-ccfc915b29ef> (64-bit) or
<http://www.microsoft.com/downloads/en/details.aspx?FamilyID=1aaa3f65-bab0-42e6-861b-a25adf258ef3> (32-bit)

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SETUP AND DEPLOYMENT



Setup – General

- Windows Server 2008 SP2 Platform Pre-reqs
 - [.NET Framework 3.5 SP1](#)
 - [.NET Framework 3.5 Family Update](#)
 - [Windows Management Framework](#) (WinRM 2.0 and Windows PowerShell v2)
 - Ex2010 RTM: Hub / Mailbox: [Microsoft Filter Pack](#)
 - Ex2010 SP1: Hub / Mailbox: [Office 2010 Filter Packs](#)
- Windows Server 2008 R2 Platform Pre-reqs
 - Ex2010 RTM: Hub / Mailbox: [Microsoft Filter Pack](#)
 - Ex2010 SP1: Hub / Mailbox: [Office 2010 Filter Packs](#)



Setup – General (SP1)

- Required Hotfixes

- Client Access Servers

- [KB983440](#) – Win7 rollup package (PR for QFE 810219)
 - [KB977020](#) – FIX: An application...throws an exception on a computer that is running Windows 7
 - [KB982867](#) – WCF: Enable WebHeader settings on the RST/SCT
 - Optional: additional fix for WCF ([KB972251](#)) for specific scenario where smartcards are being used to authenticate access to ECP



Setup – General (SP1)

- Required Components
 - Unified Messaging Servers
 - UCMA – Unified Communications Managed API 2.0, Core Runtime (64-bit)
 - Microsoft Server Speech Platform Runtime (x64)



Setup – General

- Automate Windows 2008 SP2 OS pre-reqs
`ServerManagerCmd -i RSAT-ADDS Web-Server
Web-Metabase Web-Lgcy-Mgmt-Console Web-
ISAPI-Ext NET-HTTP-Activation Web-Basic-
Auth Web-Digest-Auth Web-Windows-Auth
Web-Dyn-Compression RPC-over-HTTP-proxy
Web-Net-Ext -Restart`
- Pre-defined XML files available with build
 - Typical Install (M/H/C)
`ServerManagerCmd -ip <Exchange install
files>\Scripts\Exchange-Typical.xml -Restart`

Setup – General

- Automate Windows 2008 R2 OS pre-reqs
 - Use Add-WindowsFeature cmdlet instead of Server Manager or ServerManagerCmd
- ```
Import-Module ServerManager
Add-WindowsFeature NET-Framework,RSAT-
ADDS,Web-Server,Web-Basic-Auth,Web-Windows-
Auth,Web-Metabase,Web-Net-Ext,Web-Lgcy-Mgmt-
Console,WAS-Process-Model,RSAT-Web-
Server,Web-ISAPI-Ext,Web-Digest-Auth,Web-
Dyn-Compression,NET-HTTP-Activation,RPC-
Over-HTTP-Proxy -Restart
```
- <http://technet.microsoft.com/en-us/library/bb691354.aspx>

# Setup – General

- Automate platform pre-reqs

`FilterPackx64.exe /quiet /norestart`

`dotNetFx35setup.exe /quiet /norestart`

- Client Access servers

- Net.Tcp Port Sharing service set to Automatic start

Need to manually set on Windows 2008 SP2

`Set-Service NetTcpPortSharing -StartupType Automatic`



# Setup – New Experience (SP1)

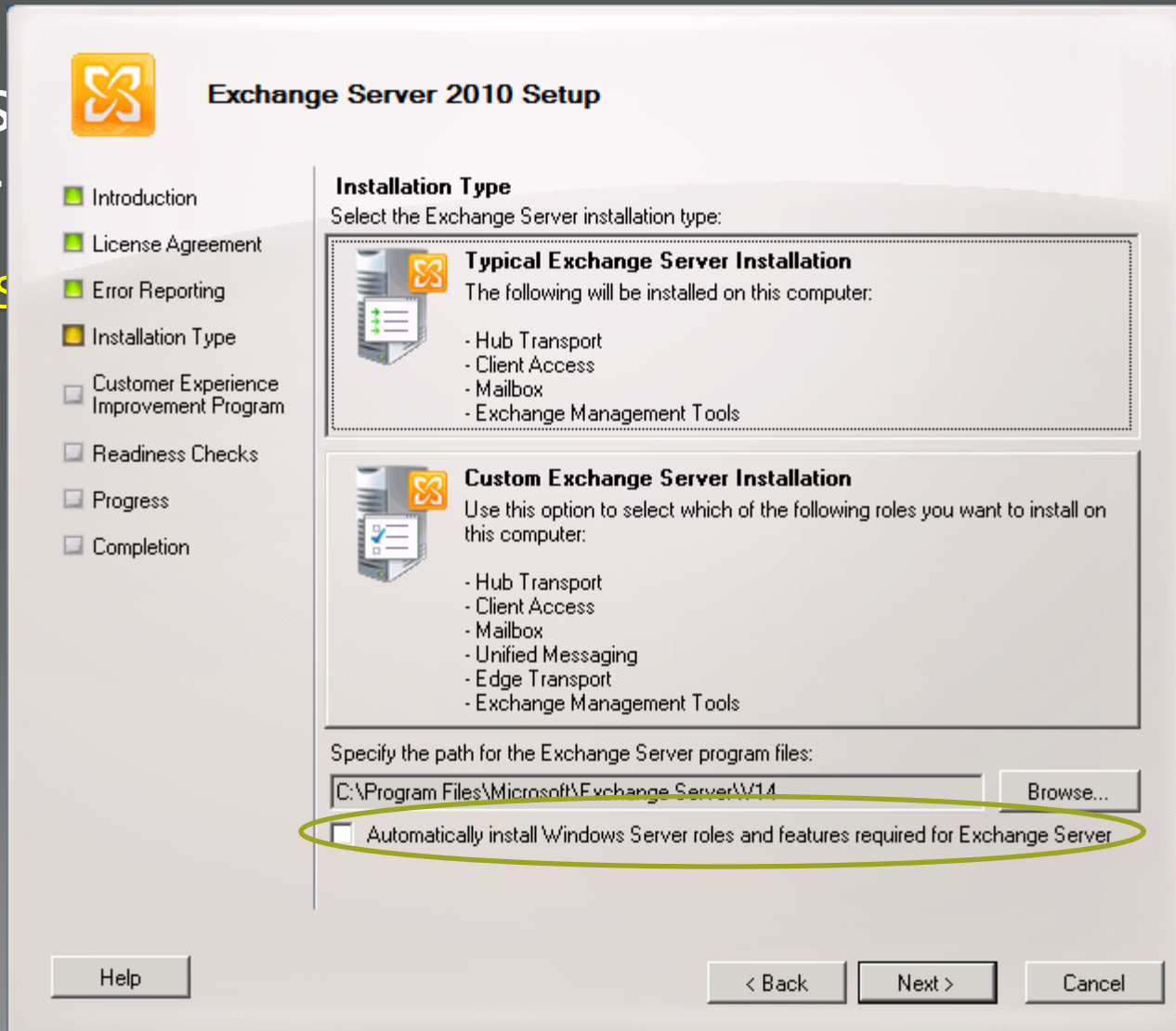
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The image shows the 'Exchange Server 2010 Setup' window. On the left is a navigation pane with the following items: Introduction, License Agreement, Error Reporting, Installation Type (highlighted), Customer Experience Improvement Program, Readiness Checks, Progress, and Completion. The main area is titled 'Installation Type' and asks the user to 'Select the Exchange Server installation type:'. There are two options: 'Typical Exchange Server Installation' and 'Custom Exchange Server Installation'. The 'Typical' option lists: Hub Transport, Client Access, Mailbox, and Exchange Management Tools. The 'Custom' option lists: Hub Transport, Client Access, Mailbox, Unified Messaging, Edge Transport, and Exchange Management Tools. Below these options is a text box for the program files path, currently showing 'C:\Program Files\Microsoft\Exchange Server\W14', with a 'Browse...' button to its right. At the bottom of the main area is a checkbox labeled 'Automatically install Windows Server roles and features required for Exchange Server', which is circled in green. At the very bottom of the window are buttons for 'Help', '< Back', 'Next >', and 'Cancel'.

**Exchange Server 2010 Setup**

- ☒ Introduction
- ☒ License Agreement
- ☒ Error Reporting
- ☒ **Installation Type**
- ☐ Customer Experience Improvement Program
- ☐ Readiness Checks
- ☐ Progress
- ☐ Completion

**Installation Type**  
Select the Exchange Server installation type:

**Typical Exchange Server Installation**  
The following will be installed on this computer:

- Hub Transport
- Client Access
- Mailbox
- Exchange Management Tools

**Custom Exchange Server Installation**  
Use this option to select which of the following roles you want to install on this computer:

- Hub Transport
- Client Access
- Mailbox
- Unified Messaging
- Edge Transport
- Exchange Management Tools

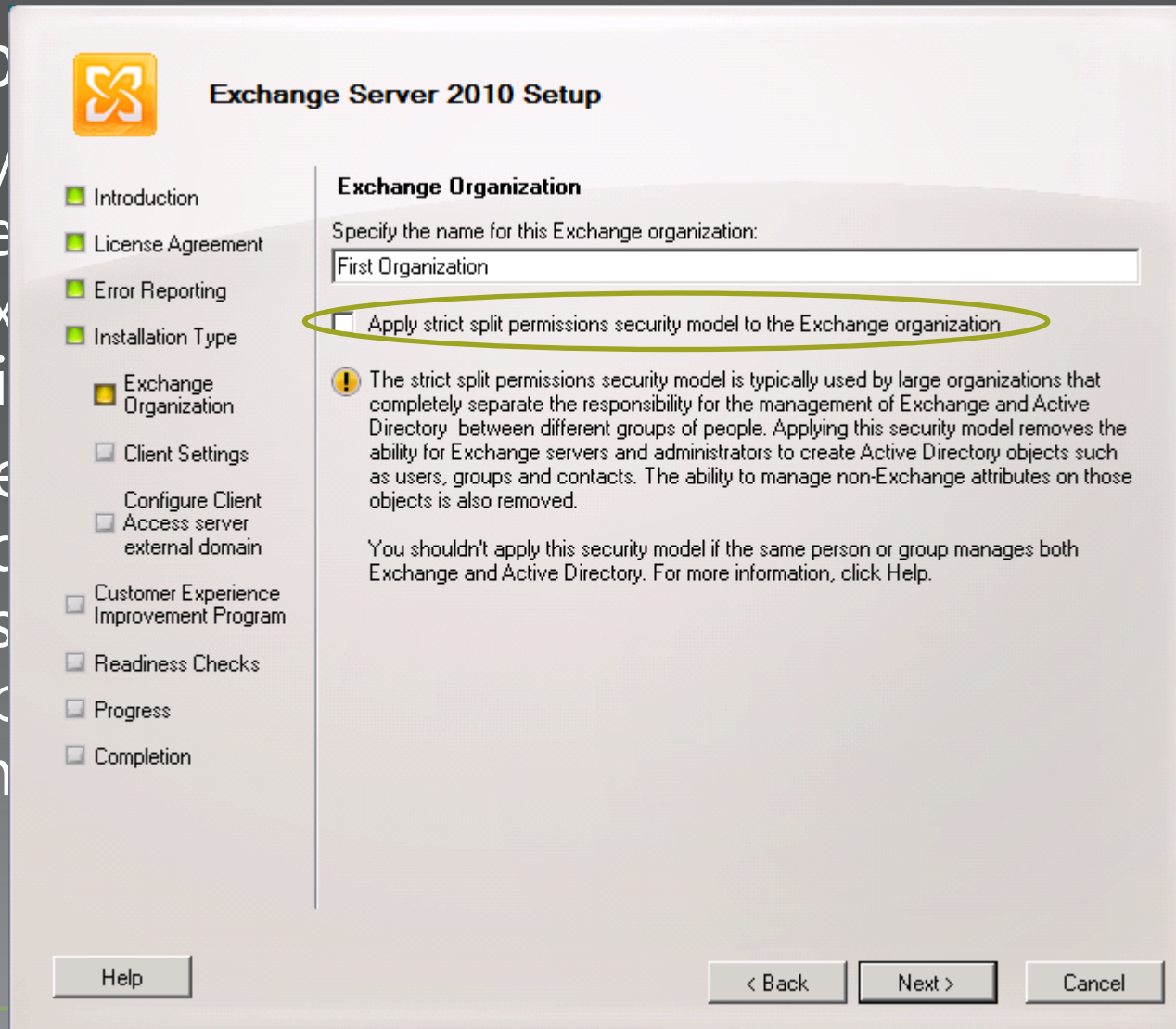
Specify the path for the Exchange Server program files:

C:\Program Files\Microsoft\Exchange Server\W14

☐ Automatically install Windows Server roles and features required for Exchange Server

# Setup – New GUI Experience (SP1)

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The image shows the 'Exchange Server 2010 Setup' window. On the left is a list of steps: Introduction, License Agreement, Error Reporting, Installation Type, Exchange Organization (selected), Client Settings, Configure Client, Access server external domain, Customer Experience Improvement Program, Readiness Checks, Progress, and Completion. The main area is titled 'Exchange Organization' and contains a text box for the organization name, currently set to 'First Organization'. Below this is a checkbox labeled 'Apply strict split permissions security model to the Exchange organization', which is circled in green. A warning icon and text explain that this model is for large organizations that separate Exchange and Active Directory management. At the bottom are 'Help', '< Back', 'Next >', and 'Cancel' buttons.

**Exchange Server 2010 Setup**

☒ Introduction  
☒ License Agreement  
☒ Error Reporting  
☒ Installation Type  
☒ Exchange Organization  
☐ Client Settings  
☐ Configure Client  
☐ Access server external domain  
☐ Customer Experience Improvement Program  
☐ Readiness Checks  
☐ Progress  
☐ Completion

**Exchange Organization**

Specify the name for this Exchange organization:

First Organization

☐ Apply strict split permissions security model to the Exchange organization

**!** The strict split permissions security model is typically used by large organizations that completely separate the responsibility for the management of Exchange and Active Directory between different groups of people. Applying this security model removes the ability for Exchange servers and administrators to create Active Directory objects such as users, groups and contacts. The ability to manage non-Exchange attributes on those objects is also removed.

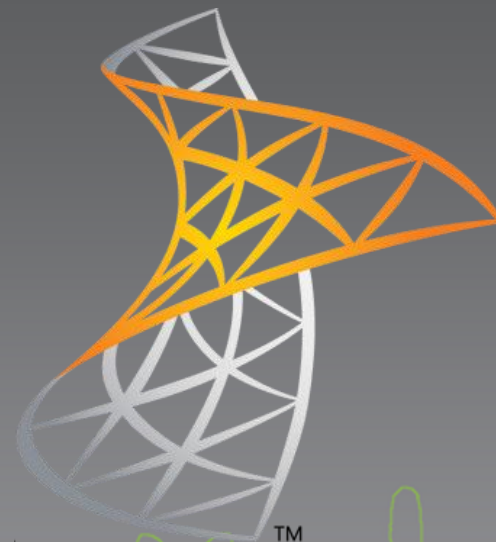
You shouldn't apply this security model if the same person or group manages both Exchange and Active Directory. For more information, click Help.

Help < Back Next > Cancel

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**Exchange Server 2010**

**MAILBOX AND  
PUBLIC FOLDER  
DATABASES**





# Databases 101

- Database is ESE, but with significant changes
  - Maximum recommended size is 2 TB
  - Each Standard Edition server supports maximum of 5 databases (active or passive) + 1 recovery database
  - Each Enterprise Edition server supports maximum of 100 databases (active or passive) + 1 recovery database
- Mailbox and public folder databases
  - Public folders supported until at least 2019

# Databases 101

- Database name and file locations can be specified as part of Setup.com
  - /Mdbname (name for default mailbox database)
  - /DBFilePath (path for default mailbox database)
  - /LogFolderPath (log path for default mailbox database)
- Databases are global objects and are therefore managed globally
  - Database names must be unique in Org
- New in SP1 - New-MailboxRepairRequest cmdlet allows you to detect and repair mailbox corruptions while leaving the mailbox database online; New-PublicFolderDatabaseRepairRequest is new for public folder databases



# Mailbox Auditing (SP1)

- Audit mailbox access by administrators, delegates, and mailbox owners
- Audit actions taken on mailbox items such as
  - Moving or deleting a message
  - Using SendAs or SendOnBehalf rights to send messages
  - Accessing a mailbox folder or a message
- Use ECP to generate report on non-owner access
- Use the Shell to search mailbox audit logs



# Mailbox Auditing (SP1)

- Enable/disable mailbox auditing

```
Set-Mailbox -Identity "Scott Schnoll" -AuditEnabled $true
Set-Mailbox -Identity "Scott Schnoll" -AuditEnabled $false
```

- Specify specific logging settings

```
Set-Mailbox -Identity "Scott Schnoll" -AuditDelegate
MessageBind,FolderBind
```

- Search audit log

```
Search-MailboxAuditLog -Identity sschnoll -LogonTypes
Admin,Delegate -StartDate 1/1/2010 -EndDate 12/31/2010
-ResultSize 2000
```

```
Search-MailboxAuditLog -Mailboxes sschnoll,rsmith
-LogonTypes Admin,Delegate -StartDate 1/1/2010 -EndDate
12/31/2010 -ResultSize 2000
```



# Public Folder Client Permissions

- Get-Pu

- Disp

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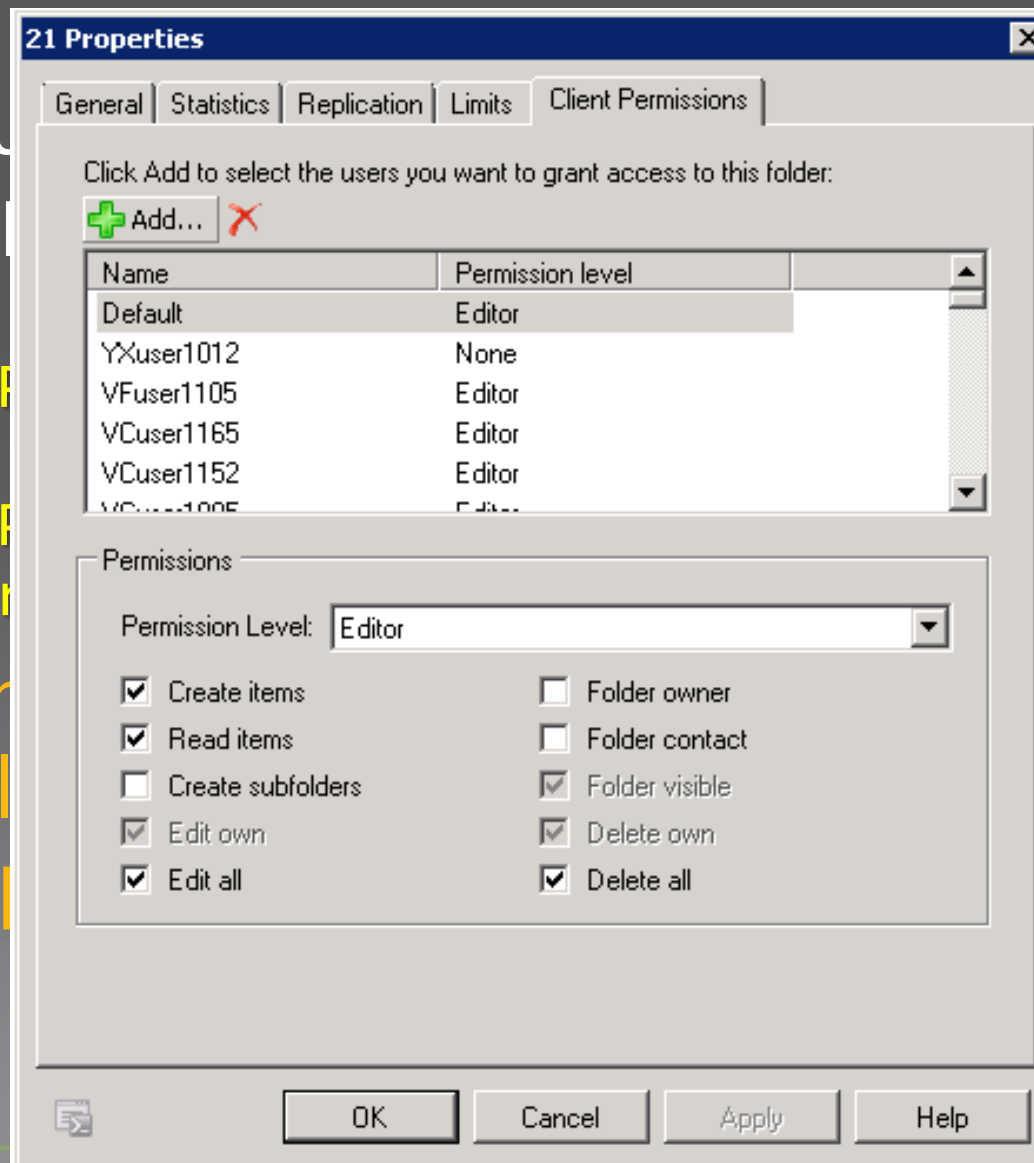
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# Database Log Growth Troubleshooter (SP1)

- **Troubleshoot-DatabaseSpace.ps1** detects excessive log growth issues and takes action
- By default
  - Runs every 15 minutes to determine available free space
  - If free space < 25%, tool runs an algorithm to determine if excessive log growth is cause
    - If it is cause, the tool quarantines or throttles mailboxes causing excessive growth, as appropriate
- Defaults defined in **StoreTSConstants.ps1**

# Database Latency Troubleshooter (SP1)

- **Troubleshoot-DatabaseLatency.ps1** used by SCOM, but can be used outside of SCOM as a schedule task
  - Defaults defined in **StoreTSConstants.ps1**
- Checks for database latencies above value of LatencyThreshold (default is 70 ms)
- Checks disk's transfer rate against read rate and read latency performance counters
- Checks to see if any user is using more than one thread for duration of **TimeInServerThreshold** (default is 10 min)



# OTHER SP1 IMPROVEMENTS

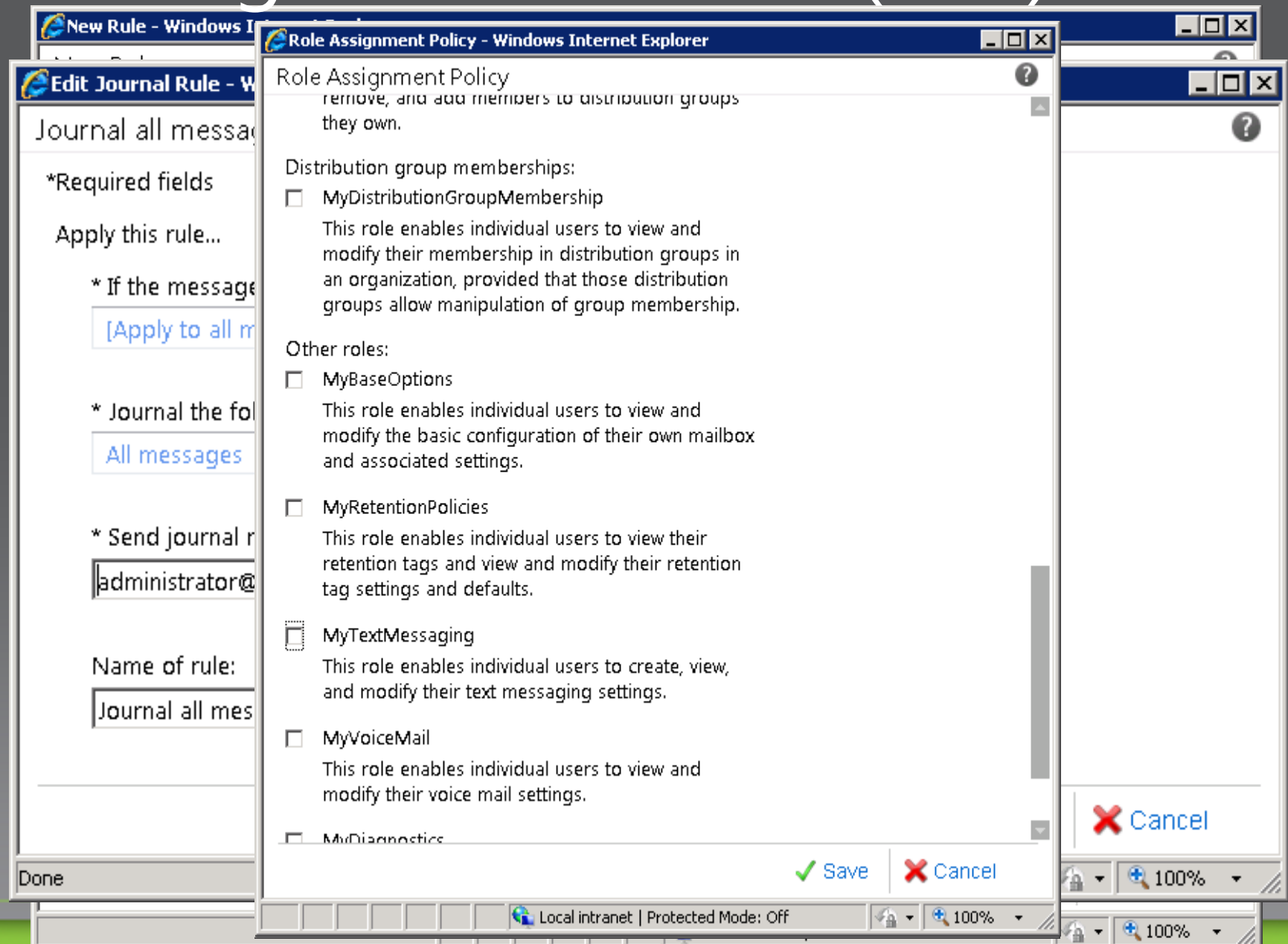




# New Exchange Control Panel UI

- Create and configure transport rules
- Create and configure journaling rules
- Manage Exchange ActiveSync policies
- Manage RBAC Roles Groups and User Roles
- Create and manage resource mailboxes
- Create and manage security groups
- Create and manage Allow/Block/Quarantine policies
- SP1: Admins no longer need to have a mailbox to be able to access ECP

# Exchange Control Panel (ECP)



# Flexible and Reliable

- Improved High Availability and Disaster Recovery
  - Enhanced form of continuous replication
  - Datacenter Activation Coordination (DAC) mode support for all DAGs
  - Faster failovers with improved post-failover client experience
  - Automatic active mailbox database redistribution
  - New management scripts for server maintenance



# Flexible and Reliable

- SMTP Failover and Load Balancing Improvements
  - Enhanced DNS is used to evenly load balance when all servers are healthy, but things become uneven when a server is unhealthy
  - SP1 introduces new behavior that detects and tracks unhealthy servers
    - For example, Hub1 needs to route several messages to another site which contains Hub2, Hub3, and Hub4. If Hub1 knows that Hub3 is unavailable, it'll remove that server from the list of possible targets and only route to Hub2 and Hub4, evenly load balancing across them

# Anywhere Access

- Improved management of relationship between OWA and Office Communications Server (OCS)/Lync Server
  - Now managed using cmdlets
  - Configuration information now stored in Active Directory instead of web.config file
- 27 new OWA themes available!
  - Set a default theme for all users
  - Create custom themes by modifying existing themes
  - Control the order of themes listed in OWA

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## Microsoft® Outlook® Web App

Change Password

Your password has expired and you need to change it before you sign in to Outlook Web App.

Domain\user name:

Current password:

New password:

Confirm new password:

Submit

Connected to Microsoft Exchange

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# Anywhere Access

- Better Mobile Experience
  - Conversation view experience on par with Outlook Web App
  - Photos supported in Global Address List contact card
  - Exchange ActiveSync (EAS) throttling support
  - Information Rights Management support in EAS
  - Block/Quarantine notification to mobile device via EAS



# Protection and Compliance

- Personal Archive Enhancements
  - Archive and primary mailboxes on separate databases
  - Outlook 2007 support for personal archive
  - .PST file import/export for archive and primary mailboxes
  - Support for “admin enabled” delegate access to archive
  - Archive provisioning and configuration with Exchange Control Panel
  - Exchange Web Services access to the archive mailbox





# Protection and Compliance

- Retention Policy Management Enhancements
  - Create and Configure Retention Tags and Policies in EMC
  - User Self-service for selection of optional Retention Policies in ECP
- Multi-Mailbox Search Enhancements
  - Search results preview including item count and keyword statistics
  - Optional de-duplication of search results





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