



PAUL CUNNINGHAM

EXCHANGESERVERPRO.COM

Upgrading to Exchange Server
2010

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- ▶ My name is Paul Cunningham
- ▶ My website is ExchangeServerPro.com
- ▶ My email is paul@exchangeserverpro.com
- ▶ My Twitter is [@ExchServPro](https://twitter.com/ExchServPro)
(or <http://twitter.com/exchservpro>)

Hash tag: **#infrasat**



AGENDA

- ▶ About Exchange Server 2010
- ▶ Upgrading to Exchange Server 2010
 - ▶ Planning + Design
 - ▶ Build + Test
 - ▶ Co-Existence
 - ▶ Migration
 - ▶ Decommissioning
- ▶ Q&A

ABOUT



Microsoft®
Exchange Server 2010

ARCHITECTURAL CHANGES (ROLES)

Exchange Server 2003	Exchange Server 2007/2010
Front End Server	Client Access Server role
Bridgehead Server	Hub Transport Server role
Back End Server	Mailbox Server role
Third-party AV/AS system	Edge Transport Server role
Third-party phone/voicemail system	Unified Messaging Server role

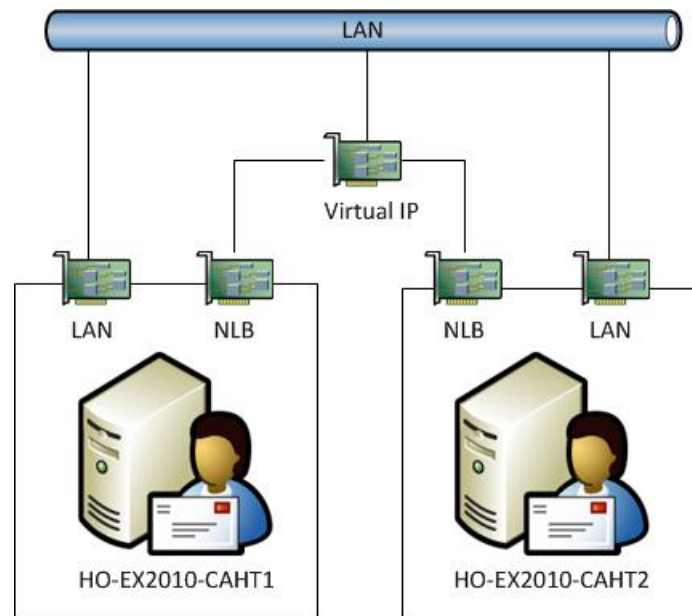
ARCHITECTURAL CHANGES (MAPI)

Exchange Server 2007	Exchange Server 2010
Client Access Server role (OWA, ActiveSync, Web Services)	Client Access Server role (OWA, ActiveSync, Web Services, MAPI)
Hub Transport Server role	Hub Transport Server role
Mailbox Server role (MAPI for mailbox and public folders)	Mailbox Server role (MAPI for public folders only)
Edge Transport Server role	Edge Transport Server role
Unified Messaging Server role	Unified Messaging Server role

ARCHITECTURAL CHANGES (HA)

Exchange Server 2007	Exchange Server 2010
Standalone Mailbox Server	Standalone Mailbox Server
Local Continuous Replication (LCR)	Database Availability Group (DAG)
Single Copy Cluster (SCC)	
Cluster Continuous Replication (CCR)	
Standby Continuous Replication (SCR)	

ARCHITECTURAL CHANGES (CAS HA)



PLANNING



<http://www.flickr.com/photos/jay0110/>

Planning Steps

- ▶ Download Software and Tools
- ▶ Collect Discovery Information
- ▶ Resolve Outstanding Issues

Download Software and Tools

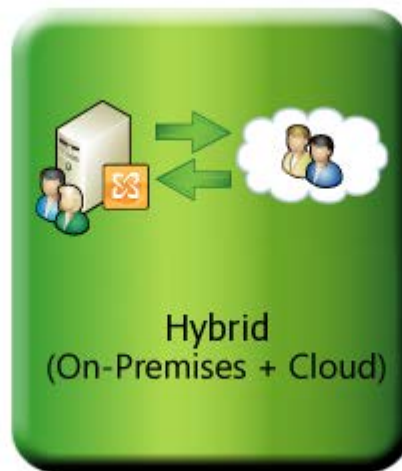
- ▶ Exchange Server 2010 SP1
- ▶ Exchange Deployment Assistant
- ▶ Exchange Profile Analyzer
- ▶ Exchange Pre-Deployment Analyzer
- ▶ 2010 Office Filter Pack

Links at:

<http://exchangeserverpro.com/infrasat>



Exchange Deployment Assistant



Links at:

<http://exchangeserverpro.com/infrasat>

Collect Discovery Information

- ▶EPA Report
- ▶Storage Quotas
- ▶Room and Resource Mailboxes
- ▶Public Folders
- ▶PST Files
- ▶Email Routing
- ▶Email Clients
- ▶Integrated Apps/Devices

Exchange Profile Analyzer (EPA) Report

Overall Statistics

All sizes are displayed in kilobytes (KB).

Results without Time Frame Applied

Mailbox

Aggregate of mailbox size:	avg:	142,565.76
	min:	0
	max:	3,286,446.00

Total count: 417

Total size: 60,440,094.00

Size of various system folders:

inbox:	31,878,177.00
deleteditems:	1,324,622.00
outbox:	91,117.00
sentitems:	15,522,814.00
journal:	9,963.00
drafts:	154,727.00
junkmail:	44,783.00

Message size

Aggregates of message size across all messages:	avg:	76.94
	min:	0
	max:	203,505.02

Number of messages within certain size range:	0 -2:	106804	16.60 %
	2-10:	260149	40.44 %
	10-100:	221005	34.35 %
	100-1024:	46603	7.24 %
	1024-5120:	7596	1.18 %
	5120-2147483647:	1157	0.18 %

Storage Quotas

- ▶ What are they now?
- ▶ What are they going to be for Exchange 2010?
- ▶ Exchange 2010 default mailbox quota...?
- ▶ Microsoft "Exchange 2010 Large Mailbox Vision" Whitepaper

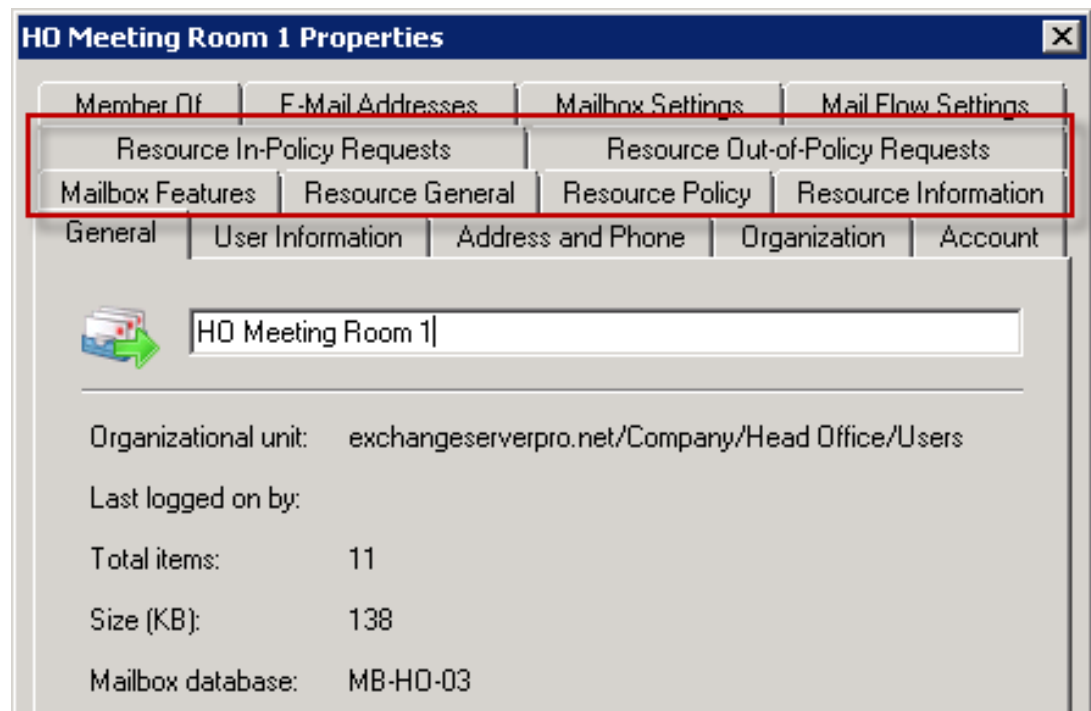
Links at:

<http://exchangeserverpro.com/infrasat>



Room/Resource Mailboxes and Public Folders

- ▶ Exchange 2003, standard mailbox
- ▶ Exchange 2007/2010, special
- ▶ Public Folders, migrate to mailboxes



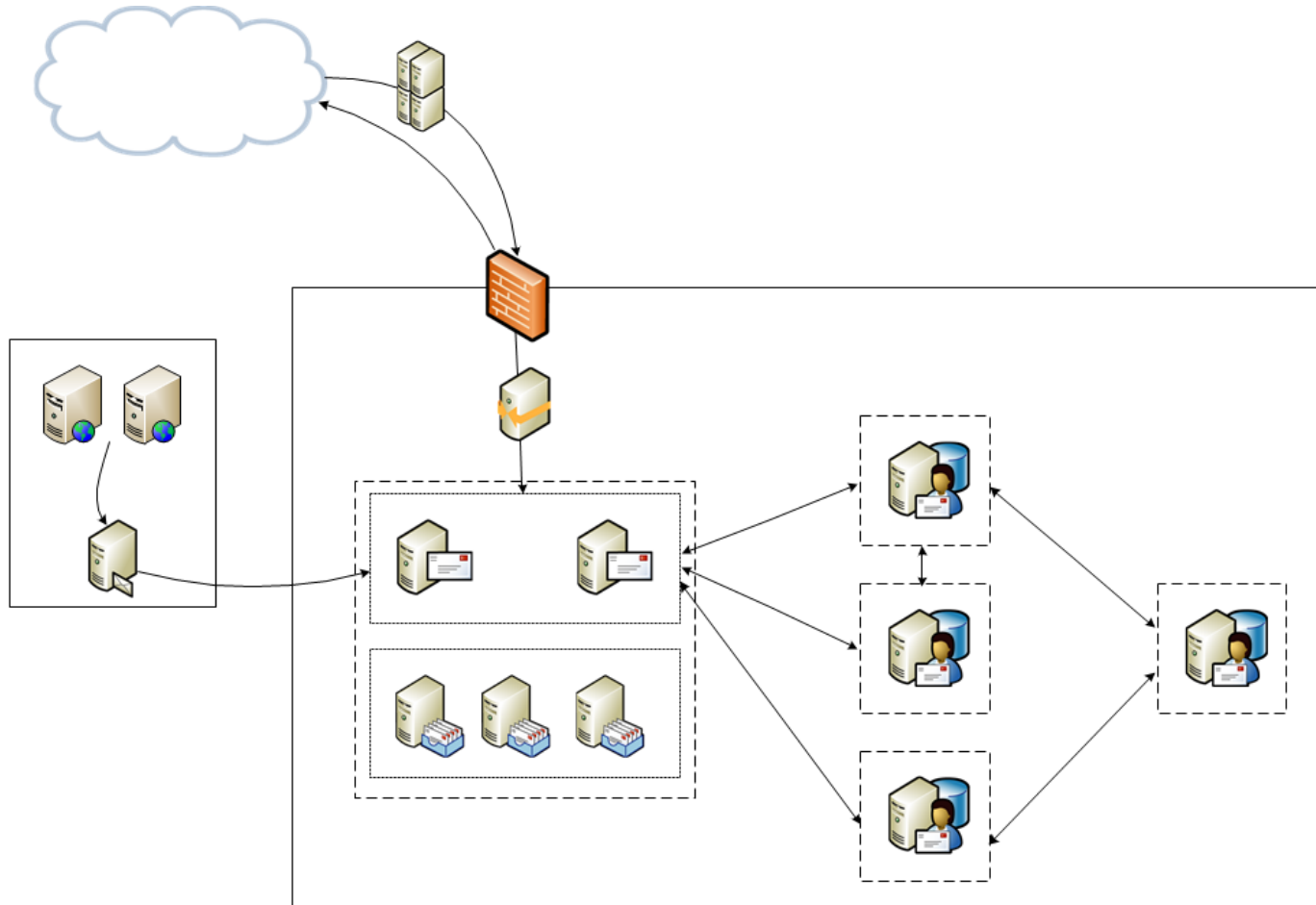
PST Files

- ▶ Import to mailboxes
- ▶ Import to archive mailboxes, or third-party archive system
- ▶ COMING SOON: PST Capture Tool for discovery and import

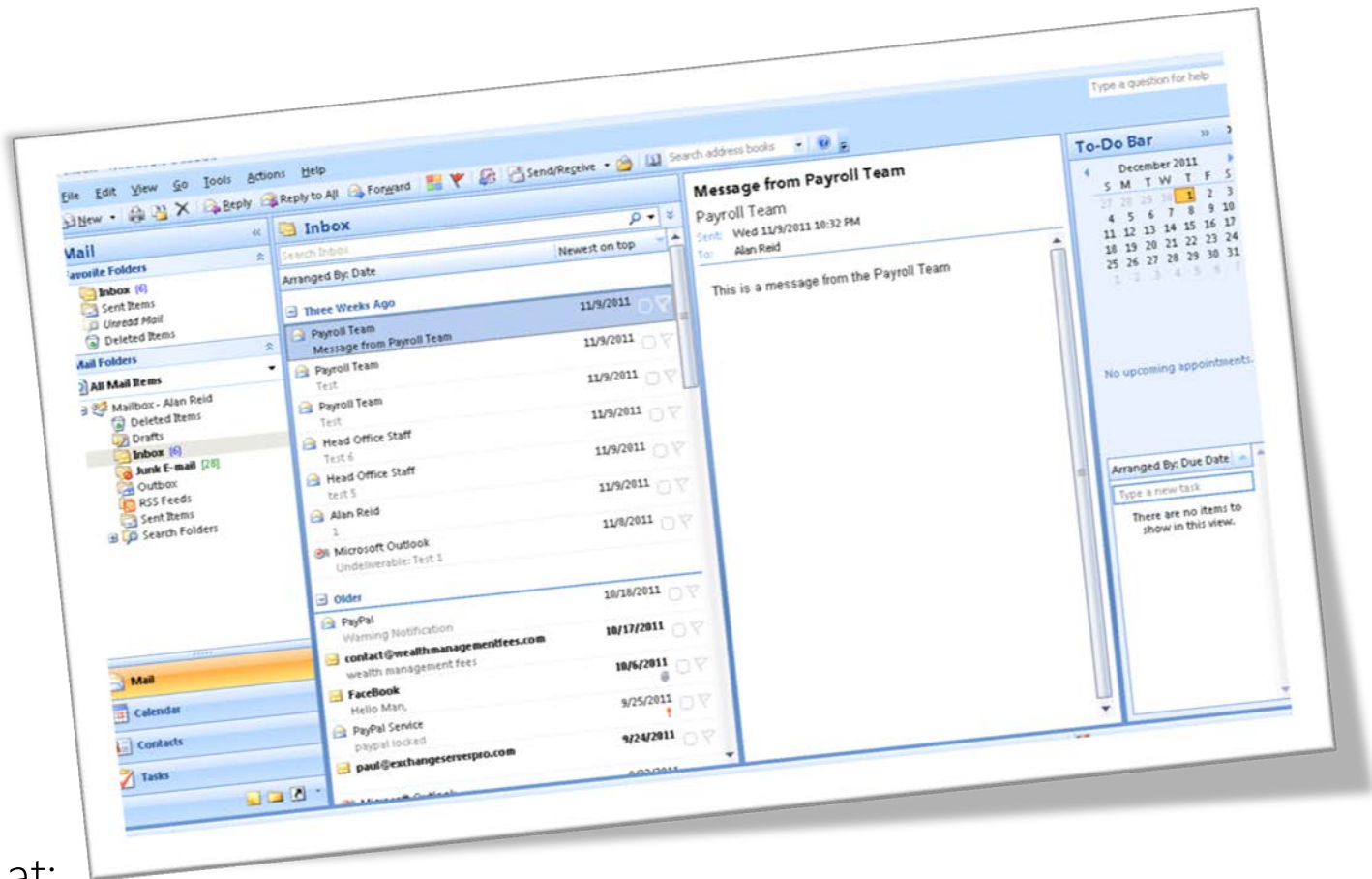
Public Folders

- ▶ De-Emphasized in Exchange Server 2010, but still supported
- ▶ Only *required* for....?
- ▶ Future of Public Folders?

Email Routing Topology



Client Software Versions



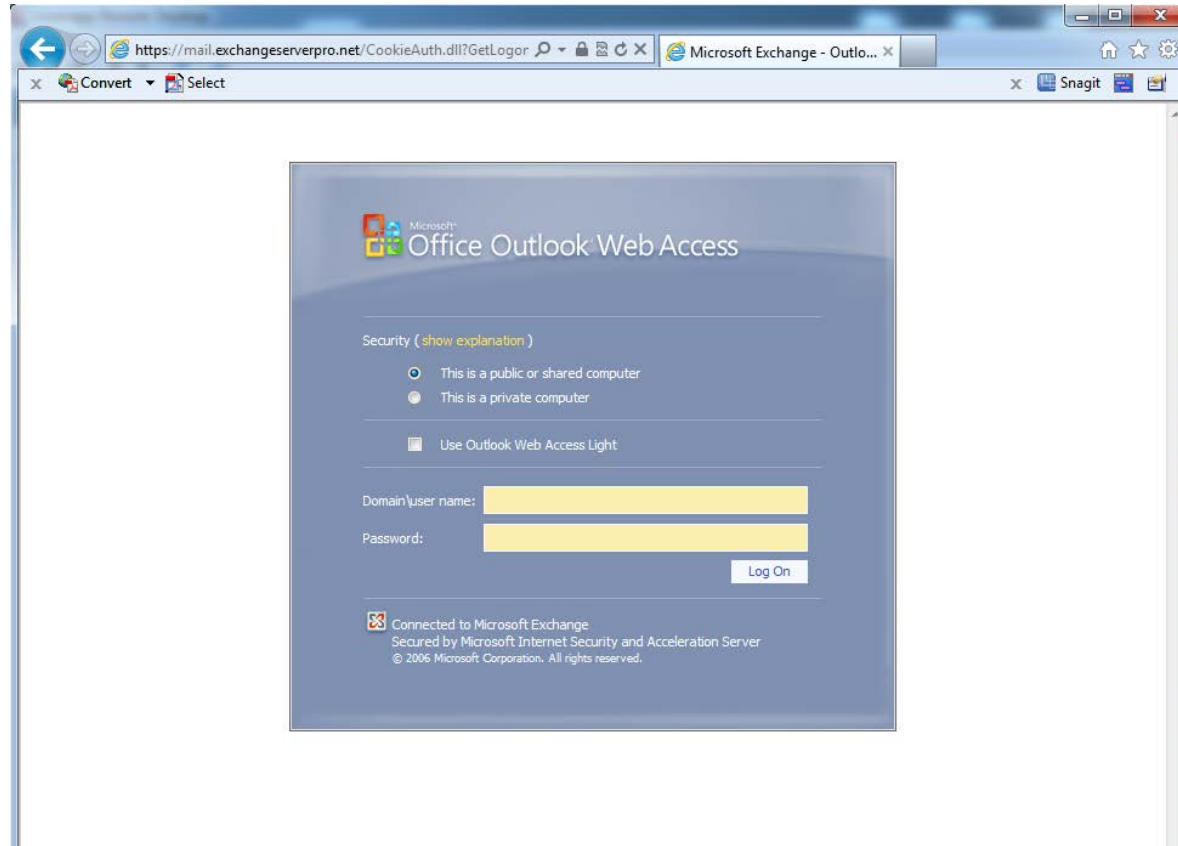
Links at:

<http://exchangeserverpro.com/infrasat>

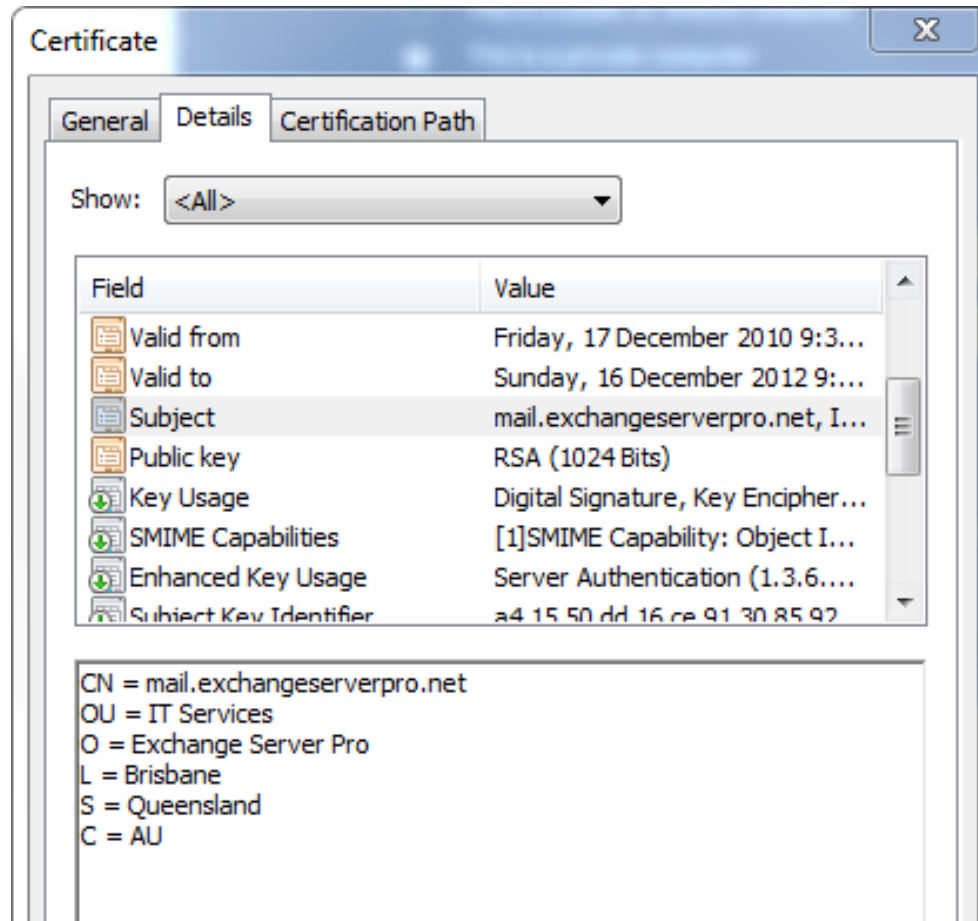
Mail-Integrated Apps and Devices

Product	Exchange 2007 Compatible	Exchange 2010 Compatible
Trend Micro Scanmail for Exchange v6.0	No (requires v8)	No (requires v10)
Trend Micro Scanmail for Exchange v8.0	Yes	No (requires v10)
Clearswift MailSweeper	Not version dependent	Not version dependent
Symantec Mail Security (Appliance)	Not version dependent	Not version dependent
Blackberry Enterprise Server 4.1.6	Exchange 2007 SP1, Yes Exchange 2007 SP2, No, requires 4.1.7	No, requires v5.0.1
Ontrack PowerControls 5	Yes	No, requires v6.0
Microsoft Outlook 2003	Yes	Yes (with RPC encryption disabled on server)
HP OpenView Data Protector 6.0	Yes	No, requires v6.1
VMware ESX 3.5 U4	Yes	No, requires Update 5
[REDACTED]	To be determined in Proof of Concept	To be determined in Proof of Concept

Public Names



SSL Certificates



Pre-Deployment Analyzer

The screenshot displays the Microsoft Exchange Pre-Deployment Analyzer application window. The title bar reads "Microsoft Exchange Pre-Deployment Analyzer". The main header area contains "Microsoft Exchange Pre-Deployment Analyzer" and the "Microsoft Windows Server System" logo.

On the left side, there is a navigation pane with the following options:

- Welcome
- Connect to Active Directory
- Start a new scan
- Select a scan to view
- View a report

Below the navigation pane is a "See also" section with links to help and feedback pages.

The main content area is titled "View Report" and shows the date "7/5/2011 8:59:22 PM". It includes a "Select Report Type:" section with radio buttons for "List reports" (selected), "Tree reports", and "Other reports". There is also a link to "Send feedback and suggestions about this tool to Microsoft".

The report content is organized into tabs: "All Issues" and "Informational Items". The "Informational Items" tab is active, showing a list of 42 items. The items are as follows:

- Found 1 Active Directory domain(s) in the forest.
- Found 1 Active Directory tree(s) in the forest.
- Found 1 administrative group(s) in the organization.
- Found 1 DNS domain(s) containing Exchange servers: exchangese...
- Found 1 routing group(s) in the organization.
- Found 2 Active Directory server(s) running Windows Server 2008.
- Found 2 Active Directory site(s) containing Exchange servers: Bran...
- Found 2 Active Directory site(s) in the forest.
- Found 399 pre-Exchange 2010 mailboxes in the organization.
- Found 7 server(s) running Exchange Server 2007.

Below the list, there is a section for "Forest:" with a sub-section for "Domain: ESPNET" containing the item:

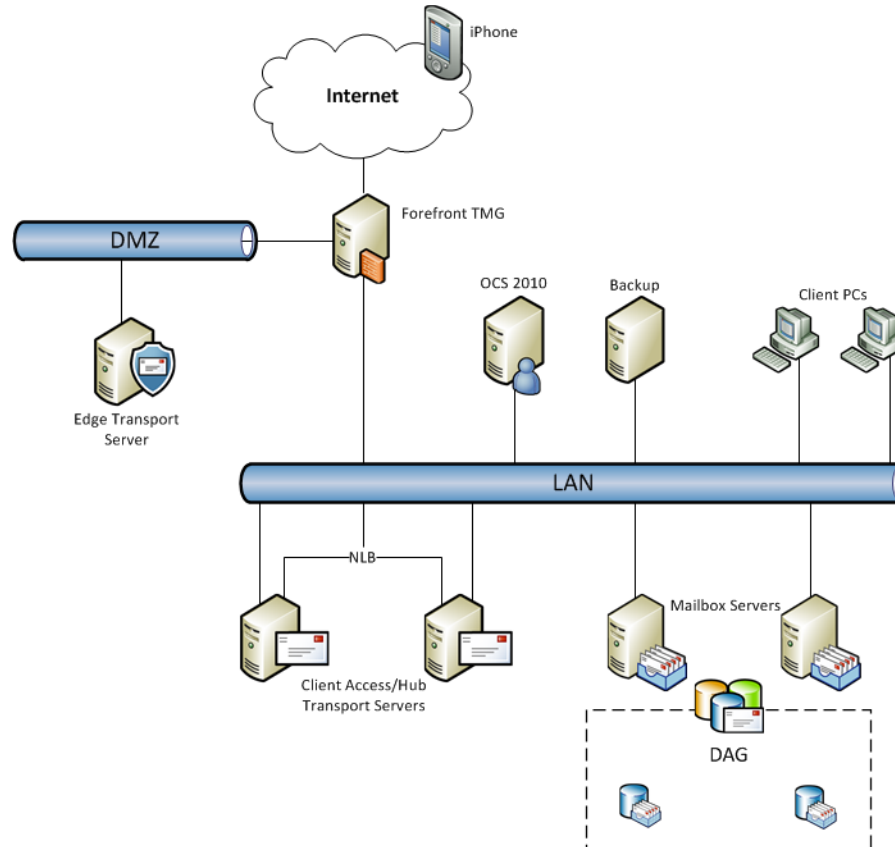
- NetBIOS and DNS domain name mismatch Domain: ESPNET

The footer of the application window contains the copyright notice "©2007 Microsoft Corporation. All rights reserved." and the Microsoft logo.

Planning

- ▶ Downloaded the software and tools
- ▶ Run the Exchange Profile Analyzer
- ▶ Identified storage quotas
- ▶ Identified room/equipment mailboxes and public folders
- ▶ Audited the network for PST file usage
- ▶ Identified public folder usage
- ▶ Identified the email routing topology
- ▶ Identified all client types and versions
- ▶ Identified mail-integrated applications and devices
- ▶ Planned your SSL certificates
- ▶ Run the Exchange Pre-Deployment Analyzer


DESIGN



Links at:

<http://exchangeserverpro.com/infrasat>

BUILD



Welcome to Microsoft Exchange Server 2010 Service Pack 1 (SP1). Exchange Server is the industry's leading server for e-mail, calendaring, and unified messaging.

Microsoft
Exchange Server 2010

Plan

- Read about Microsoft Exchange Server 2010 Service Pack 1
- Read about deploying languages
- Use the Exchange Server 2010 Deployment Assistant

Install

- Step 1: Install .NET Framework 3.5 SP1 - Installed
- Step 2: Install Windows PowerShell v2 - Installed
- Step 3: Choose Exchange language option
- Step 4: Install Microsoft Exchange
- Step 5: Get critical updates for Microsoft Exchange

Enhance

- Install Microsoft Forefront Protection 2010 for Exchange Server

Close

Installation Sequence

1. Schema, Forest- & Domain-prep
2. Client Access servers
3. Hub Transport servers
4. Mailbox servers
5. Edge/Unified Messaging servers

AutoDiscover



SSL Certificates

The screenshot shows the Exchange Management Console interface. The left-hand navigation pane is expanded to 'Server Configuration'. The main pane displays a table of server configuration objects. A context menu is open over the object 'HO-EX2010-CAHT1', and the 'New Exchange Certificate...' option is highlighted with a red rectangular box.

Name	Role	Version
HO-EX2010-CAHT1		Build 218.15)

Context Menu Options:

- Manage Client Access Role
- Manage Hub Transport Role
- Manage Diagnostic Logging Properties...
- Enter Product Key...
- New Exchange Certificate...**
- Import Exchange Certificate...
- Properties
- Help

Below the context menu, a sub-pane titled 'Exchange Certificates' is visible, showing a table of certificates:

Name	Self Signed	Status	Service
Microsoft Exchange	True	The certificate is valid for ...	IMAP, F

SSL Certificates

Exchange Configuration
Use this page to describe your Microsoft Exchange configuration and domain information. If the wizard does not automatically provide this information, you can enter it yourself.

Sharing

Client Access server (Outlook Web App)

Outlook Web App is on the Intranet

Domain name you use to access Outlook Web App internally:

Outlook Web App is on the Internet

Domain name you use to access Outlook Web

Client Access server (Exchange ActiveSync)

Exchange Configuration
Use this page to describe your Microsoft Exchange configuration and domain information. If the wizard does not automatically provide this information, you can enter it yourself.

Sharing

Client Access server (Outlook Web App)

Client Access server (Exchange ActiveSync)

Exchange Active Sync is enabled

Domain name you use to access Exchange ActiveS

Client Access server (Web Services, Outlook Anyw

Exchange Configuration
Use this page to describe your Microsoft Exchange configuration and domain information. If the wizard does not automatically provide this information, you can enter it yourself.

Client Access server (Exchange ActiveSync)

Client Access server (Web Services, Outlook Anywhere, and Autodiscover)

Exchange Web Services is enabled

Outlook Anywhere is enabled

External host name for your organization (example: mail.contoso.com):

The Autodiscover service can use a URL in either a long format (example: autodiscover.contoso.com) or in a shorter format (example: contoso.com). Specify whether to use a long or shorter URL.

Autodiscover used on the Intranet

Autodiscover used on the Internet

Long URL (Example: autodiscover.contoso.com)

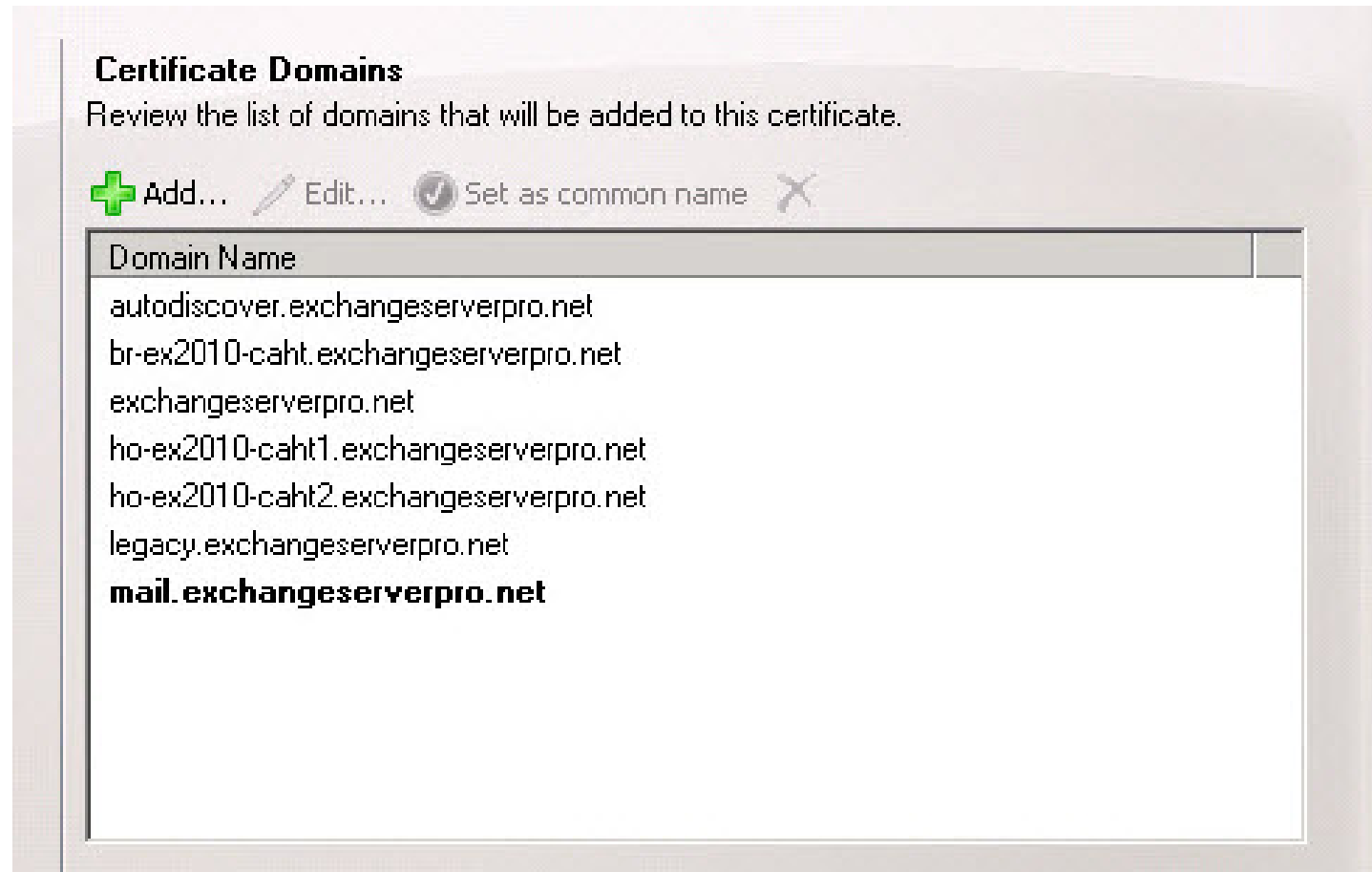
Short URL (Example: contoso.com)

URL in another format (Example: when using the DNS SRV method)

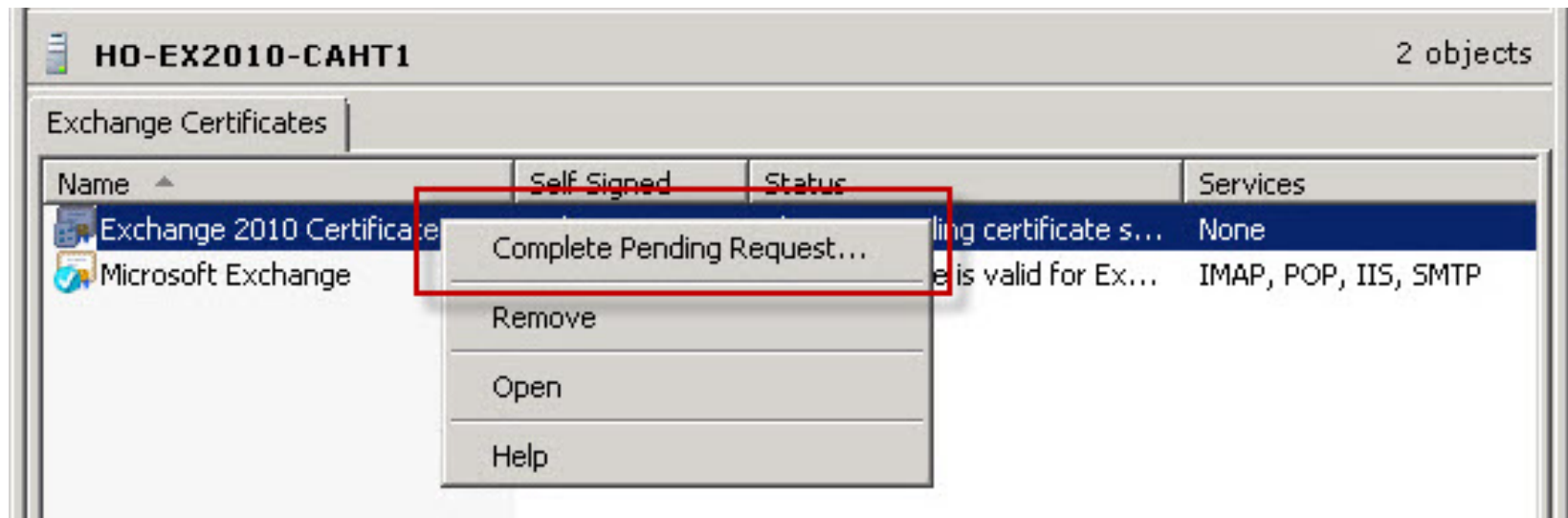
Autodiscover URL to use:

Client Access server (POP/IMAP)

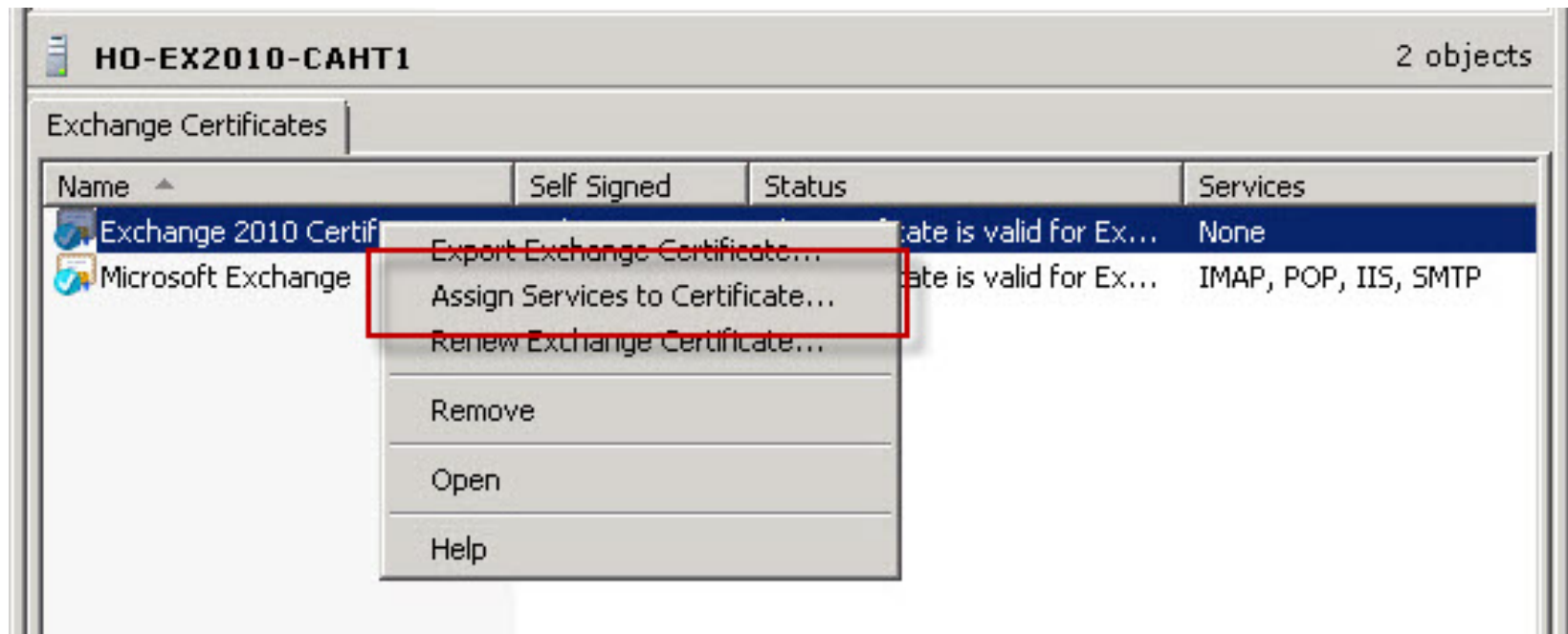
SSL Certificates



SSL Certificates



SSL Certificates



CAS Arrays

```
[PS] C:\>get-mailboxdatabase | ft name,rpcclientaccessserver -auto
```

Name	RpcClientAccessServer
MB-HO-01	outlook.exchangeserverpro.net
MB-HO-02	outlook.exchangeserverpro.net
MB-BR-01	BR-EX2010-CAHT.exchangeserverpro.net
MB-HO-03	outlook.exchangeserverpro.net

Routing Group Connectors



Database Availability Groups



+



One Mailbox server now...

...add more later.

Use the Shell

```
[PS] C:\>Get-MailboxDatabase | Set-MailboxDatabase  
-IssueWarningQuota 3.7Gb -ProhibitSendQuota 4Gb  
-ProhibitSendReceiveQuota 4.3Gb
```

Build Phase Checklist

- ▶ Schema Update, Forest- and Domain-Prep
- ▶ Install each of the Exchange Server 2010
- ▶ Deploy SSL certificates
- ▶ Configure each server role
- ▶ Configured application and device integration
- ▶ **Backups!**

CO-EXISTENCE

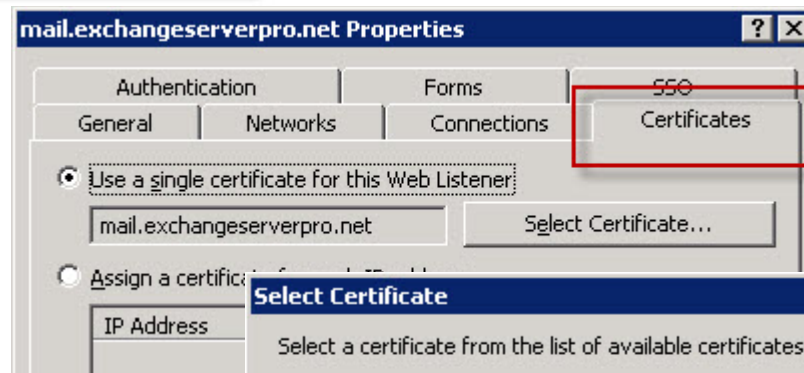
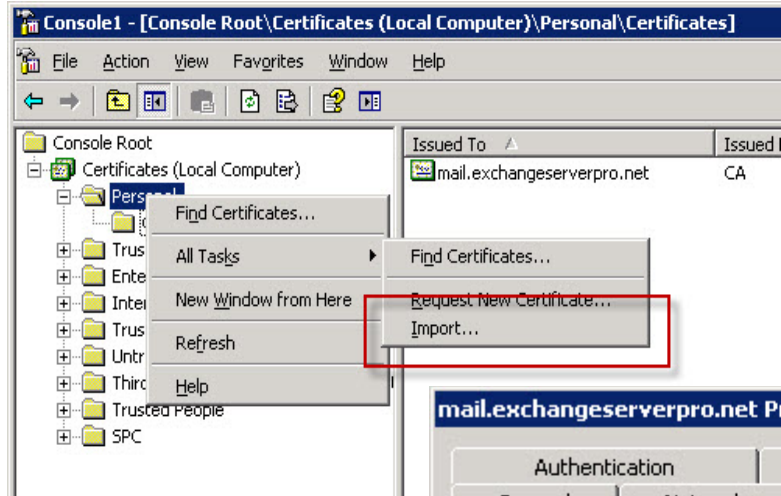
Legacy URL

```
[PS] C:\>Set-OwaVirtualDirectory -Identity "HO-EX2010-CAHT1\owa (Default Web Site)"  
-Exchange2003Url  
https://legacy.exchangeserverpro.net/owa
```

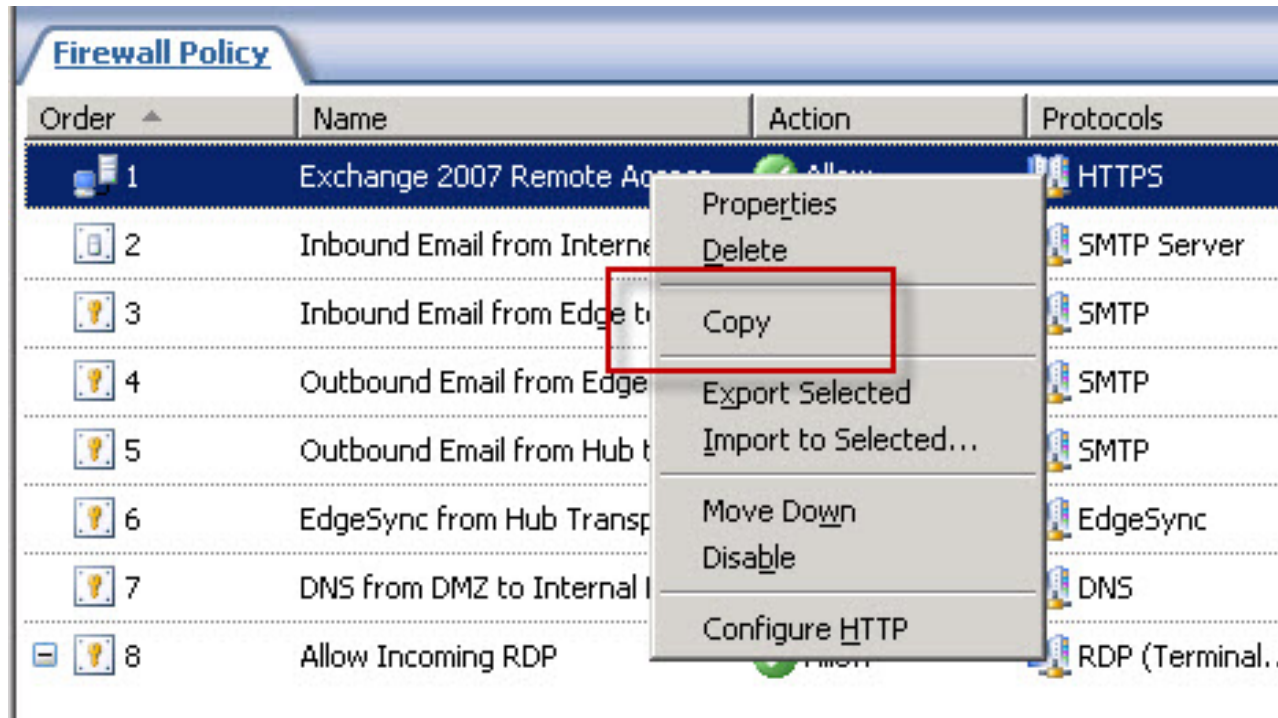
Legacy SSL Certificate

Certificate Details		Information
Common Name:	<input type="text" value="mail.exchangeserverpro.net"/>	<p>Now just copy and paste this command into Exchange Management Shell. Your CSR will be written to c:\mail_exchangeserverpro_net.csr.</p> <pre>New-ExchangeCertificate -GenerateRequest -Path c:\mail_exchangeserverpro_net.csr -KeySize 2048 -SubjectName "c=au, s=Queensland, l=Brisbane, o=Exchange Server Pro, ou=IT Services, cn=mail.exchangeserverpro.net" -DomainName autodiscover.exchangeserverpro.net, ho-ex2007-ca1.exchangeserverpro.net, legacy.exchangeserverpro.net -PrivateKeyExportable \$True</pre>
Subject Alternative Names:	<input type="text" value="autodiscover.exchangeserverpro.net, ho-ex2007-ca1.exchangeserverpro.net, legacy.exchangeserverpro.net"/>	
Organization:	<input type="text" value="Exchange Server Pro"/>	
Department:	<input type="text" value="IT Services"/>	
City:	<input type="text" value="Brisbane"/>	
State:	<input type="text" value="Queensland"/>	
Country:	<input type="text" value="au"/>	
Key Size:	<input type="text" value="2048 (recommended)"/>	
<input type="button" value="Generate"/>		

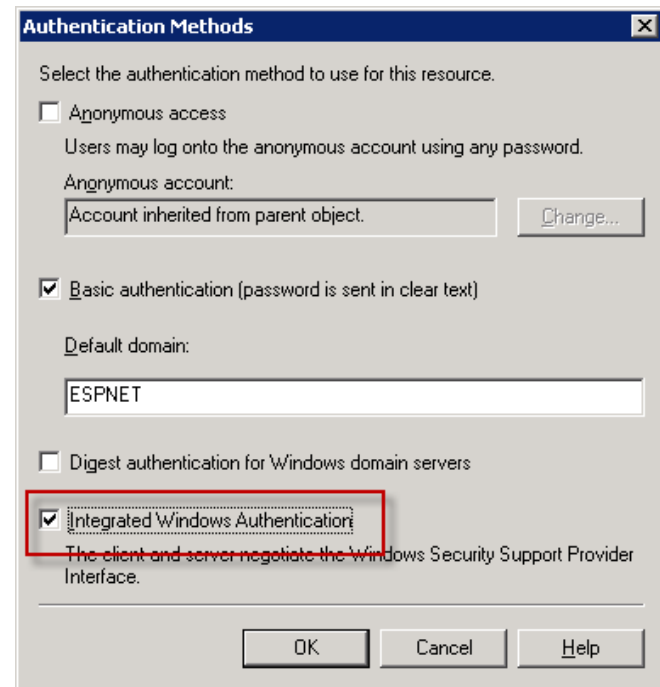
ISA SSL Certificate



ISA Legacy Publishing Rule

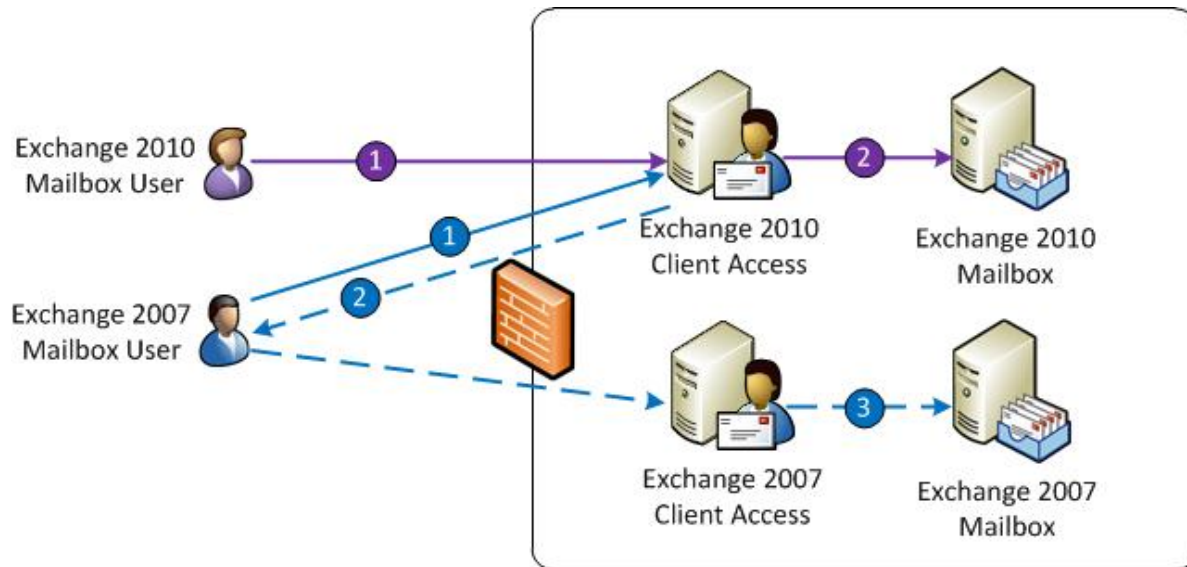


Exchange 2003 ActiveSync hotfix and permissions

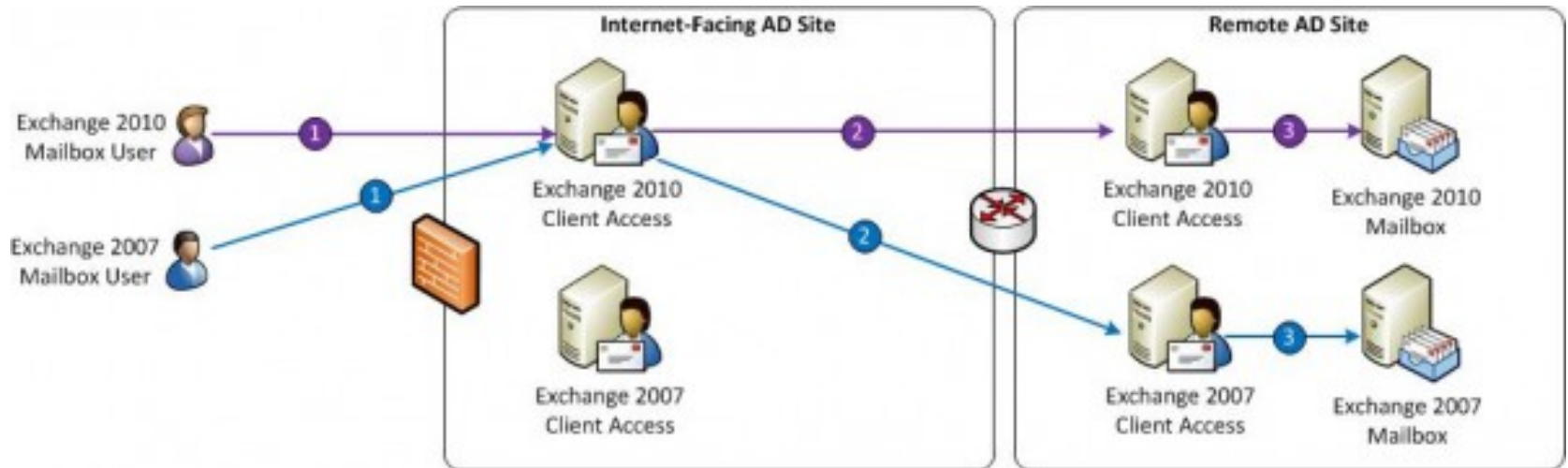


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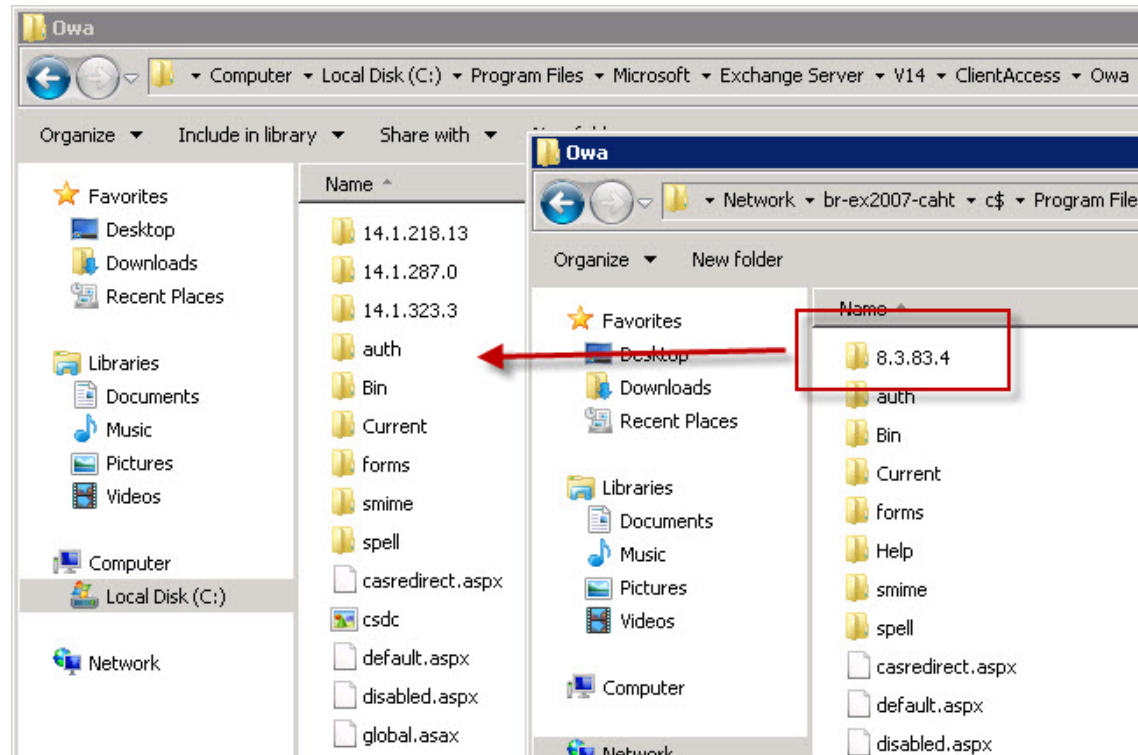
Exchange 2007 OWA Resource Files



Exchange 2007 OWA Resource Files



Exchange 2007 OWA Resource Files



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TESTING



Testing Checklist

- ▶ Create test mailboxes on each Exchange
- ▶ Test Autodiscover and auto-configuration for Outlook 2007 and 2010 clients in each site
- ▶ Test Outlook Web App
- ▶ Test mail flow internal and external to the organization
- ▶ Test public folder access
- ▶ **Test calendar Free/Busy information**
- ▶ Test high availability scenarios
- ▶ Test backup and restore of Exchange Server 2010

MIGRATION



 infrastructure
saturday

<http://www.flickr.com/photos/oneaustin/>

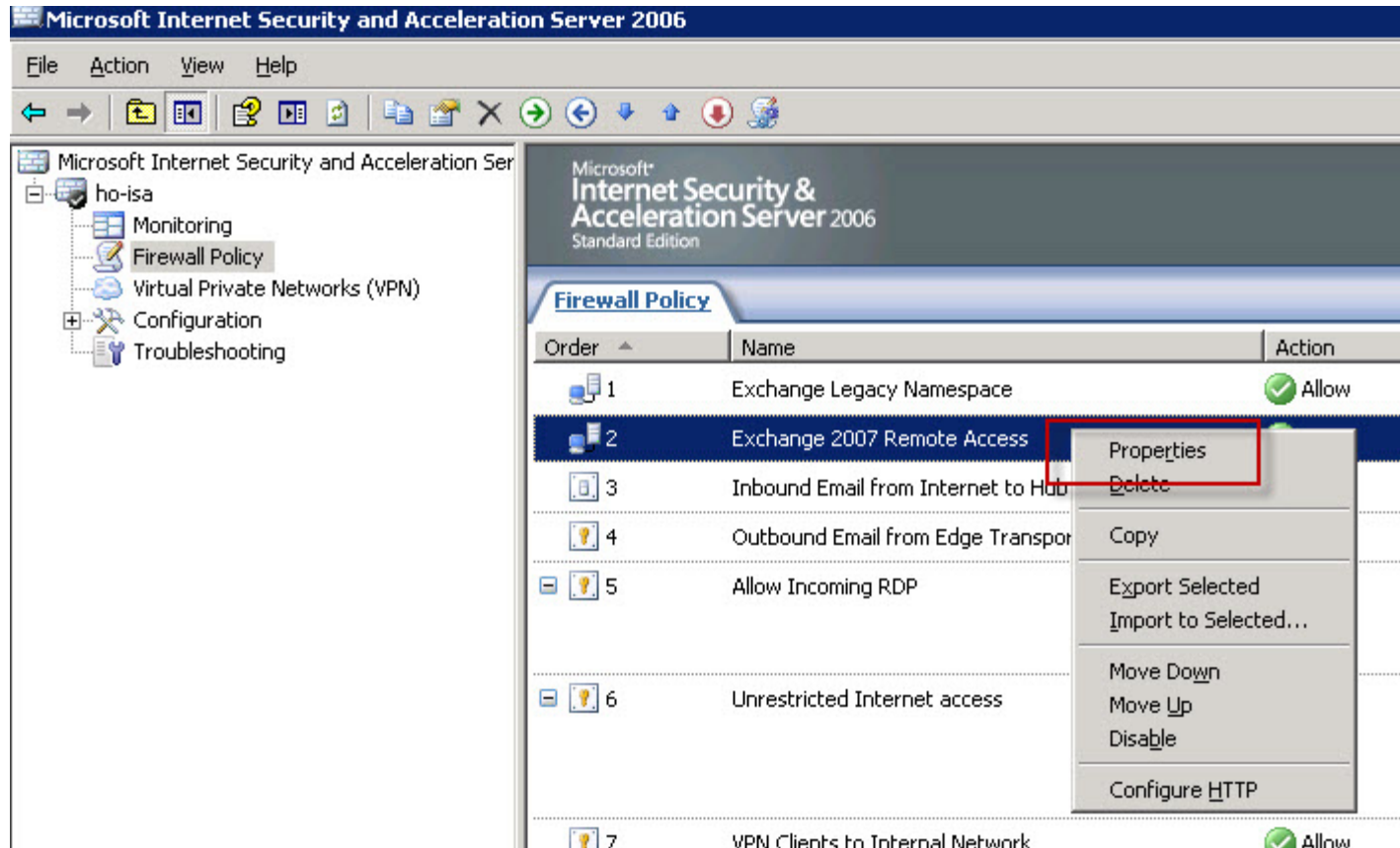
Migration Preparation

- ▶ Exchange 2010 servers built and tested
- ▶ Co-existence preparations completed
- ▶ Collect fresh planning data

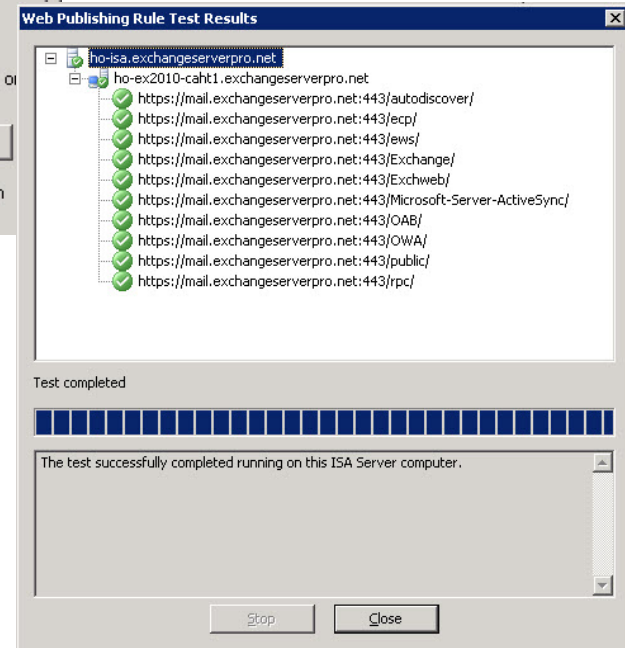
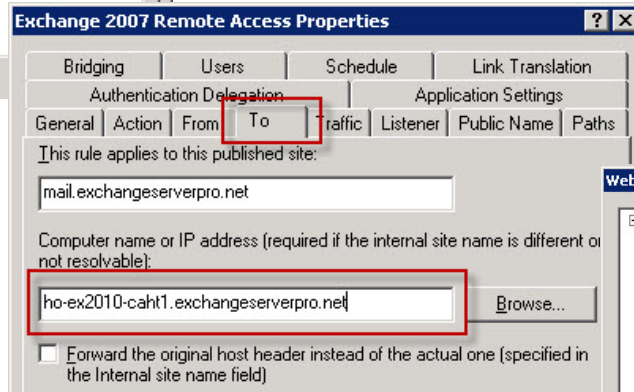
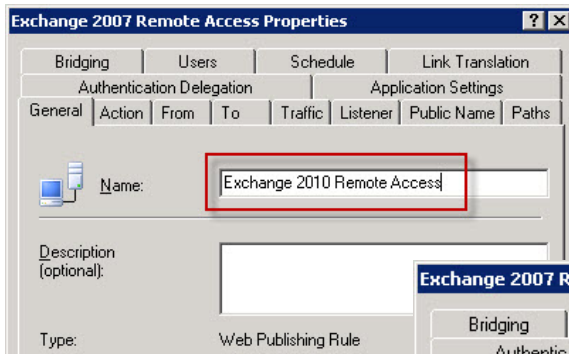
Migration Order

1. Client Access servers, starting with internet-facing site
2. Transport servers (mail routing)
3. Mailbox servers (and public folders)

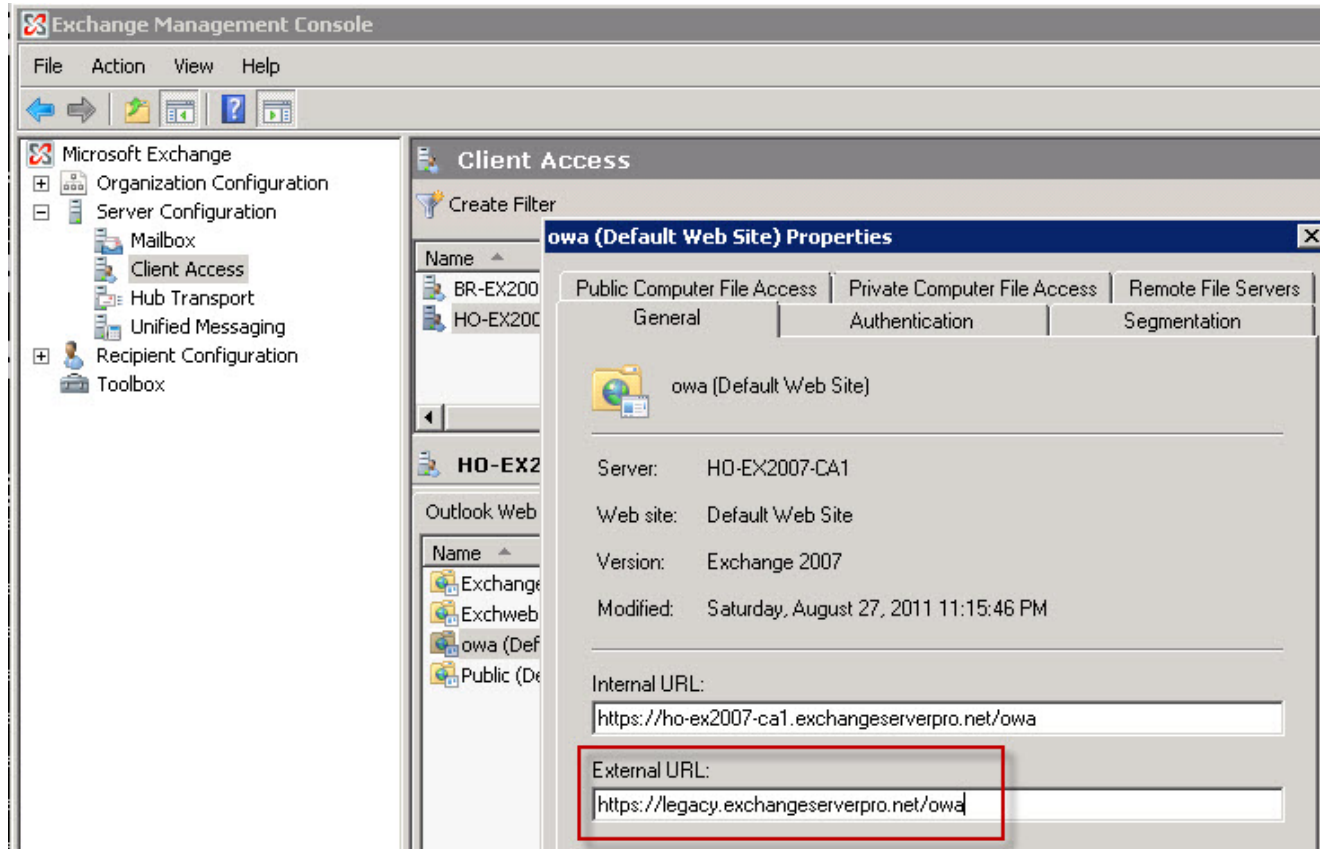
Migrating Client Access Servers




Migrating Client Access Servers







Migrating Client Access Servers



Migrating Client Access Servers

 Microsoft®
Exchange Remote Connectivity Analyzer

Select the test you want to run.

-  **Microsoft Exchange ActiveSync Connectivity Tests**
 - Exchange ActiveSync
 - Exchange ActiveSync Autodiscover
-  **Microsoft Exchange Web Services Connectivity Tests**
 - Synchronization, Notification, Availability, and Automatic Replies (OOF)
 - Service Account Access (Developers)
-  **Microsoft Office Outlook Connectivity Tests**
 - Outlook Anywhere (RPC over HTTP)
 - Outlook Autodiscover
-  **Internet E-Mail Tests**
 - Inbound SMTP E-Mail
 - Outbound SMTP E-Mail

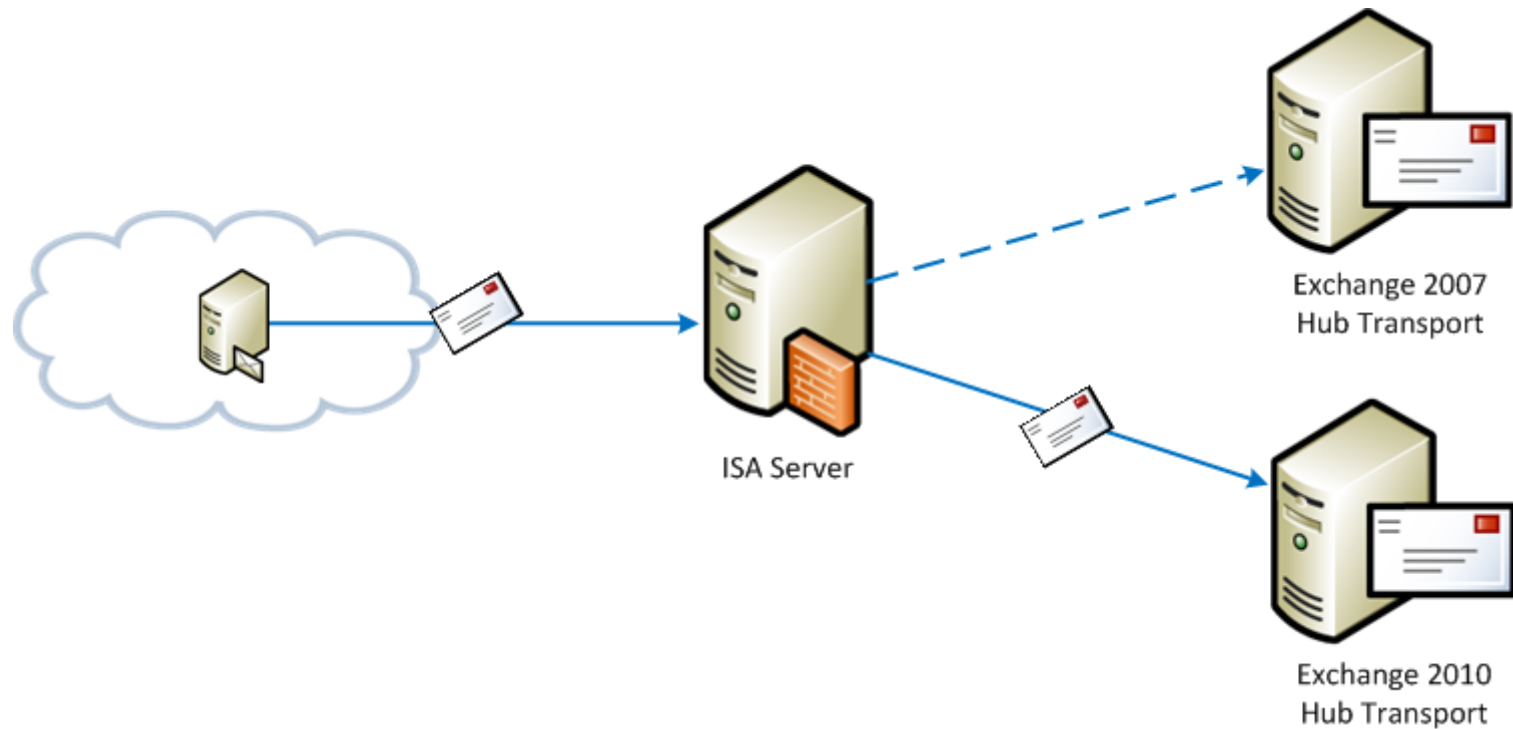
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<http://exchangeserverpro.com/infrasat>



Migrating Inbound Email



Migrating Outbound Email

The screenshot displays the Exchange Server Pro console interface. On the left, the 'Hub Transport' task pane is visible, with 'New Send Connector...' highlighted by a red box. The main console area shows a tree view of the Exchange server configuration. Under 'Administrative Groups' > 'First Administrative Group' > 'Servers', the 'Internet Email' folder is selected, and a context menu is open. The 'Delete' option in the context menu is highlighted with a red box. On the right, the 'Servers' list pane shows three servers: ESP-BR-DC, ESP-HO-EX2003, and ESP-HO-EX2003FE.

Hub Transport

- New Remote Domain...
- New Accepted Domain...
- New E-mail Address Policy...
- New Transport Rule...
- New Journal Rule...
- New Send Connector...**
- New Edge Subscription...

Exchange Server Pro (Exchange)

- Global Settings
- Recipients
- Administrative Groups
 - Exchange Administrative Group (FYDIBOHF23SPDLT)
 - First Administrative Group
 - Servers
 - Routing Groups
 - BranchOffice
 - HeadOffice
 - Connectors
 - HO2003-HO2010
 - HO-BR
 - Internet Email**
 - Members

- Folders
- Tools

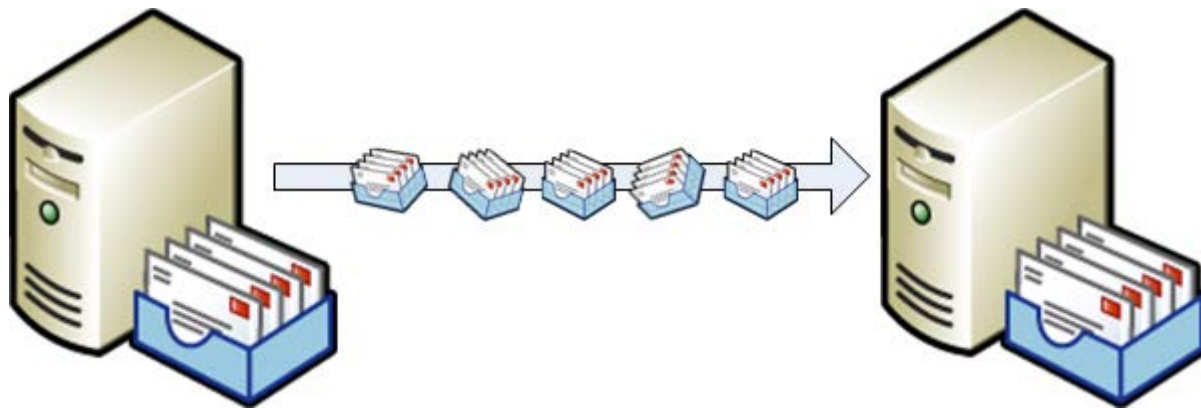
Servers

Name
ESP-BR-DC
ESP-HO-EX2003
ESP-HO-EX2003FE

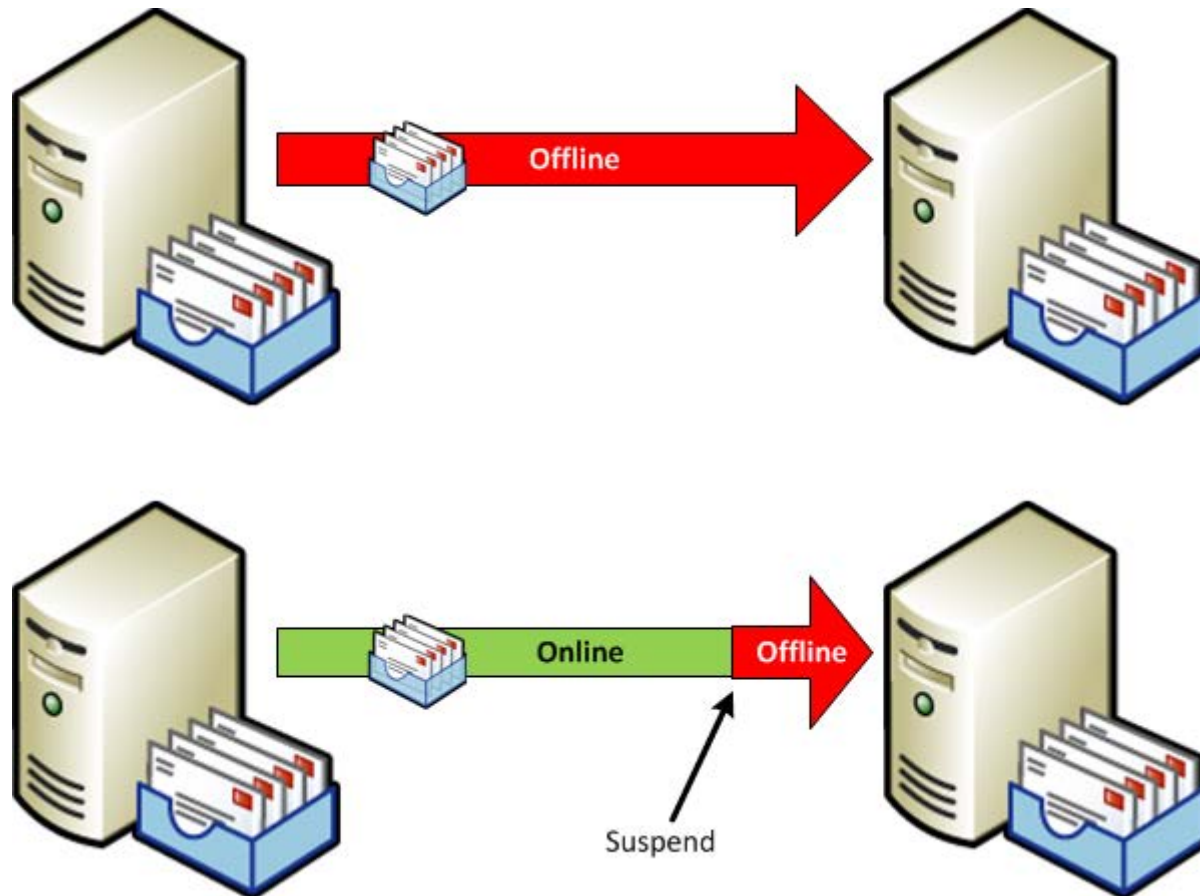
Context Menu:

- Disallow public folder referrals
- All Tasks
- New Window from Here
- Delete**
- Rename
- Refresh
- Properties
- Help

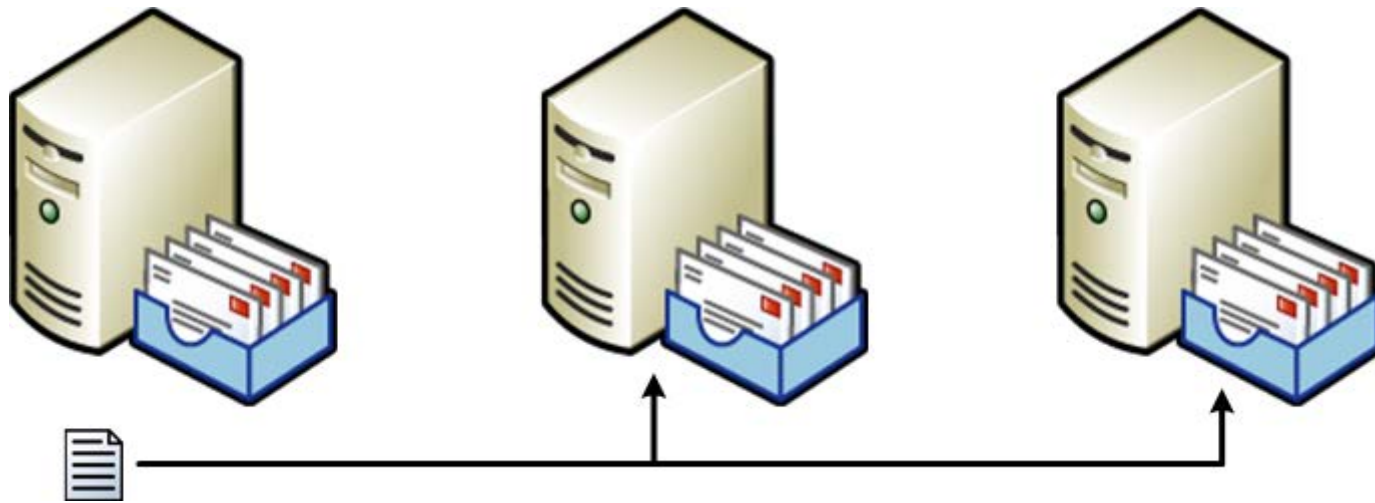
Migrating Mailboxes



Online vs. Offline Mailbox Moves



Managing Transaction Logs



Migrating Public Folders

```
[PS] C:\>cd $exscripts
```

```
[PS] C:\Program Files\Microsoft\Exchange  
Server\V14\scripts> .\MoveAllReplicas.ps1 -Server  
BR-EX2007-MB -NewServer BR-EX2010-MB
```


DECOMMISSIONING



Decommissioning

- ▶ Move Offline Address Book (OABGen)
- ▶ Remove empty databases
- ▶ Exchange 2003
 - ▶ Move Public Folder Hierarchy
 - ▶ Remove Recipient Update Service(s) (RUS)
 - ▶ Remove Routing Group Connectors

Decommissioning

- ▶ Uninstall Exchange Server 2003/2007
- ▶ Exchange 2003
 - ▶ Upgrade Email Address Policies
 - ▶ Upgrade the Global Address List (GAL) and Address Lists
- ▶ Upgrade Distribution Groups

Finally

- ▶ Run an Exchange Best Practices Analyzer scan
- ▶ Documentation



Q&A Time

Links



Slides and links from this presentation
<http://exchangeserverpro.com/infrasat>

Exchange Migration Guides
<http://exchangeserverpro.com/ebooks>

Free Exchange Server Articles and Tutorials
<http://exchangeserverpro.com>

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