Exchange Server 2007 to 2010 Migration Guide

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INSIDE THIS GUIDE

INTRODUCTION

Welcome to the **Exchange Server 2007 to 2010 Migration Guide**, the step by step guide to a smooth migration for your organization to Microsoft Exchange Server 2010.

This guide will walk you through the process of migrating your existing Exchange Server 2007 Organization to Exchange Server 2010 following a simple step by step process covering each of the important phases of the migration.
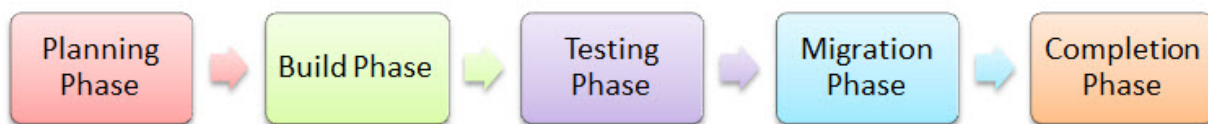
Ideally you are the administrator of an existing Exchange Server environment that is relatively simple and contains only a few Exchange servers.

However if you have a more complex environment to work with then you can still benefit from the advice and processes in this guide, and simply scale them out to meet the size of your environment.

BEFORE WE BEGIN

Before undertaking an Exchange Server 2010 migration in your production environment I highly recommend following this guide at least once in a lab environment so that you are familiar with each of the stages of the migration.

Although the migration is a relatively low risk activity when done correctly, the potential impact of a failure is very high.

Above all you must ensure that your environment is properly backed up and that you have a working disaster recovery plan in place before you attempt a migration to Exchange Server 2010.

YOUR UNIQUE EXCHANGE SERVER ENVIRONMENT

It is impossible for a migration guide such as this one to perfectly align itself with every Exchange Server environment out there in the real world.

Your Exchange Server environment is unique to your organization and has its own specific needs.

As you work through this guide you should expect to make several decisions of your own to adjust the examples shown to suit your own environment.

For example, where this guide walks through the deployment of Exchange Server 2010 server roles in a particular topology, you may choose to distribute your server roles onto fewer servers, or onto more servers.

In some parts of the guide multiple deployment scenarios are presented, such as the use of Client Access Server Arrays and Database Availability Groups. But you might be planning to deploy single servers only. So in those cases you will be told which sections you can skip if they do not apply to you.

THE EXAMPLE EXCHANGE SERVER ENVIRONMENT

This guide will go step by step through a migration project for an example Exchange Server environment.

THE EXCHANGE SERVER 2007 ORGANIZATION

For this guide an Active Directory and Exchange Server 2007 environment has been configured as the starting point of the migration project.
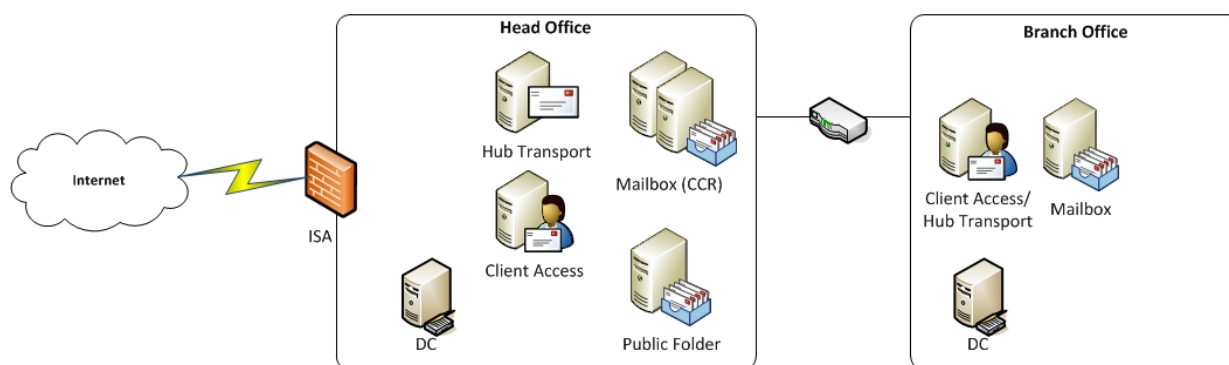
The network consists of:

- A head office with…
    - 1 x Windows Server 2008 Domain Controller
    - 1 x Exchange Server 2007 Client Access server
    - 1 x Exchange Server 2007 Hub Transport server
    - 1 x Exchange Server 2007 CCR Clustered Mailbox server
    - 1 x Exchange Server 2007 Public Folder server
    - 1 x ISA Server 2006 firewall/proxy
    - A connection to the internet

- A branch office with…
    - 1 x Windows Server 2008 Domain Controller
    - 1 x Exchange Server 2007 Client Access/Hub Transport
    - 1 x Exchange Server 2007 Mailbox server
    - A WAN connection to the head office site

During the Planning stage of this migration guide we'll cover what sort of information to collect from the existing environment to help you design the Exchange Server 2010 servers that are to be installed. We'll also cover how to prepare the environment for the first Exchange Server 2010 installation.

THE TRANSITIONAL ORGANIZATION

As we work through this guide the environment will become a Transitional Organization once the Exchange Server 2010 servers are installed.

We'll look at not only the process for installing Exchange Server 2010 at each location, but also some of the special considerations for managing the Exchange environment during this co-existence period.

THE EXCHANGE SERVER 2010 ORGANIZATION

To complete the migration project all of the legacy Exchange servers are removed from the organization.

We'll cover the migration process for moving all of the data and services from Exchange Server 2007 to Exchange Server 2010, as well as the removal of the legacy Exchange servers from the environment, and the final configuration tasks required to complete the migration.

Due to the same server roles being available in Exchange Server 2010 as with 2007 the resulting Exchange environment will be very similar to the Exchange Server 2007 environment that we begin with.

However the Exchange Server 2010 environment that is demonstrated in this migration guide will take advantage of some of the new high availability features such as Client Access Server Arrays and Database Availability Groups.
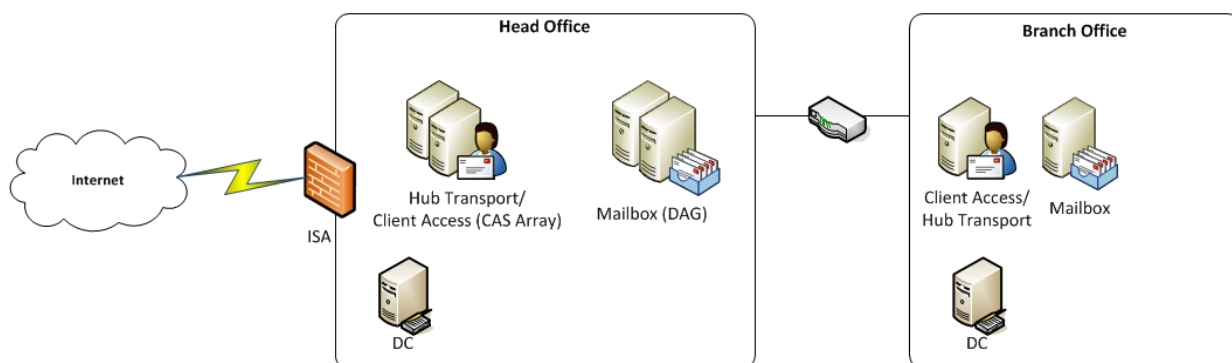
A WORD ON CHANGE CONTROL

Different organizations have their own ways of managing changes to their production environments. This guide does not dictate that any particular change control procedures are used; that is entirely up to you.

However, note that as you move through your migration project some configuration items are more sensitive to changes than others.

As one example, if you use Transport Rules in your existing Exchange 2007 organization these are something you will want to manage changes to during the migration project. The reason is that when Exchange 2010 is first installed it makes a copy of the existing Transport Rules configuration into another container in Active Directory for the Exchange 2010 Hub Transport servers to read from. However it does not synchronize them on a continual basis after that, so it is important that any changes to Transport Rules during the migration project be managed so that they are applied to both Exchange 2007 and Exchange 2010.

Other examples of changes that may impact your migration project are server IP addresses, firewalls, network routing, DNS, group policies, and mailbox storage quotas.

Hopefully you get the idea. The most important thing is that you maintain awareness of all changes in your environment, and investigate each one for potential impact on your migration project.

PLANNING THE EXCHANGE SERVER 2010 MIGRATION PROJECT

Before you begin the migration to Exchange Server 2010 you should first:

- Download the essential software and tools for an Exchange Server 2010 transition
- Collect information about your existing Exchange Server 2007 environment
- Verify that your existing network environment is ready for Exchange Server 2010

DOWNLOADING THE EXCHANGE SERVER 2010 SP1 SOFTWARE AND TOOLS

Download the following software so that you have everything you need on hand for the installation.

- [Exchange Server 2007 with Service Pack 2](#)[1]
- [Exchange Server 2010 SP1](#)[2]
- [Exchange Profile Analyzer](#)[3]
- [Exchange Pre-Deployment Analyzer](#)[4]
- [2010 Office System Converter: Microsoft Filter Pack](#)[5] (64-bit version)

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[1] http://www.microsoft.com/downloads/en/details.aspx?familyid=4C4BD2A3-5E50-42B0-8BBB-2CC9AFE3216A&displaylang=en2CC9AFE3216A&displaylang=en

[2] http://www.microsoft.com/downloads/en/details.aspx?FamilyID=50b32685-4356-49cc-8b37-d9c9d4ea3f5b

[3] http://www.microsoft.com/downloads/en/details.aspx?FamilyId=8F575F60-BD80-44AA-858B-A1F721108FAD&displaylang=en

[4] http://www.microsoft.com/downloads/details.aspx?FamilyID=88b304e7-9912-4cb0-8ead-7479dab1abf2&displaylang=en

[5] http://www.microsoft.com/downloads/en/details.aspx?displaylang=en&FamilyID=5cd4dcd7-d3e6-4970-875e-aba93459fbee

Place all of these files in a folder where you can access them as we work through this guide.

> **Tip:** You might be wondering why we are downloading the Exchange Server 2007 SP2 setup files for an Exchange Server 2010 deployment.
>
> The Exchange Server 2007 SP2 schema update is a pre-requisite to installing Exchange Server 2010. If your Exchange 2007 environment is already installed with SP2 or SP3 then you don't need to download the files again.

COLLECTING INFORMATION ABOUT YOUR EXISTING EXCHANGE SERVER 2007 ENVIRONMENT

A successful migration to Exchange Server 2010 depends a lot on your understanding of the existing Exchange Server 2007 environment.

There are many pieces of information that you should collect before you can begin installing Exchange Server 2010. Some of these will be collected by using software tools, while others must be collected manually through inspection of the current servers or speaking with other people in the organization.

As you progress through this section you can use the planning worksheet that is included with this guide to record the information that you collect.

RUNNING THE EXCHANGE PROFILE ANALYZER

The Exchange Profile Analyzer is used to collect statistical information about the Exchange organization that is helpful for understanding the size and makeup of the Exchange data that is to be migrated.

Install the Exchange Profile Analyzer by running the setup MSI file you downloaded earlier. For this demonstration I am installing the Exchange Profile Analyzer on the head office domain controller, HO-DC.

The Exchange Profile Analyzer will need an account to perform its analysis of the Exchange environment. The account should be delegated **Exchange View-Only Administrator** rights only, and can't be a member of **Domain Admins** or **Enterprise Admins**.

In this example I have created a domain user account named "epa" (remember, don't make the account a Domain Admin or Enterprise Admin). Then on an existing Exchange Server 2007 server launch the Exchange Management Shell and run the **Add-ExchangeAdministrator** command.

```
[PS] C:\>Add-ExchangeAdministrator -Identity epa -Role ViewOnlyAdmin

Identity                    Scope                    Role
--------                    -----                    ----
exchangeserverpro.net/Serv  Organization wide        ViewOnlyAdmin
ice Accounts/epa
```

Next, use the **Add-ADPermission** command to grant the account Send-As and Receive-As rights on each existing Exchange 2007 Mailbox server.

```
[PS] C:\> Get-ExchangeServer HO-EX2007-MB1 | Add-ADPermission -user epa -
AccessRights extendedright -ExtendedRights "send-as"

[PS] C:\> Get-ExchangeServer HO-EX2007-PF1 | Add-ADPermission -user epa -
AccessRights extendedright -ExtendedRights "receive-as"

[PS] C:\> Get-ExchangeServer BR-EX2007-MB | Add-ADPermission -user epa -
AccessRights extendedright -ExtendedRights "receive-as"
```

Launch the Exchange Profile Analyzer from the Start Menu.
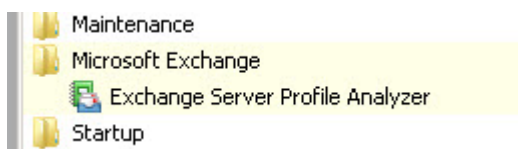
When the tool has launched click on **Connect to Active Directory**.
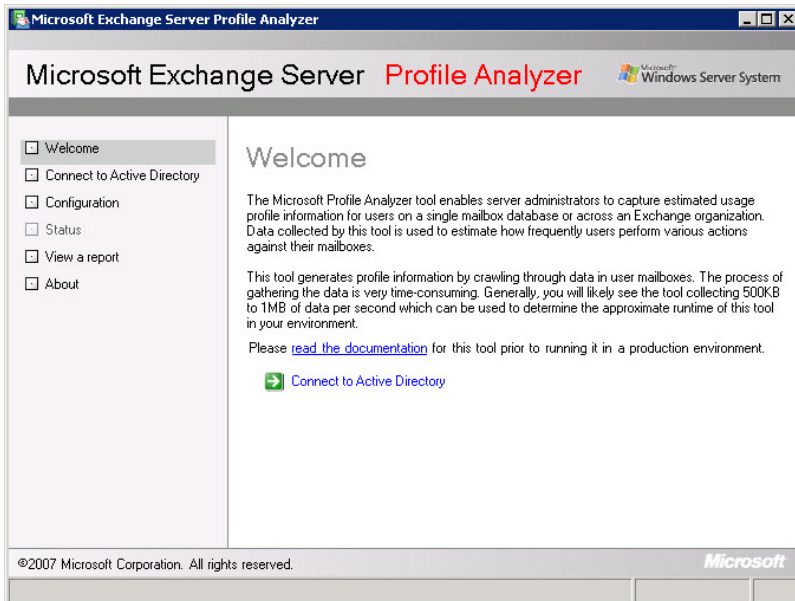
The Profile Analyzer will choose a domain controller by default. You can choose another one if you wish.

Untick the **Current User** checkbox and enter the "epa" user credentials.
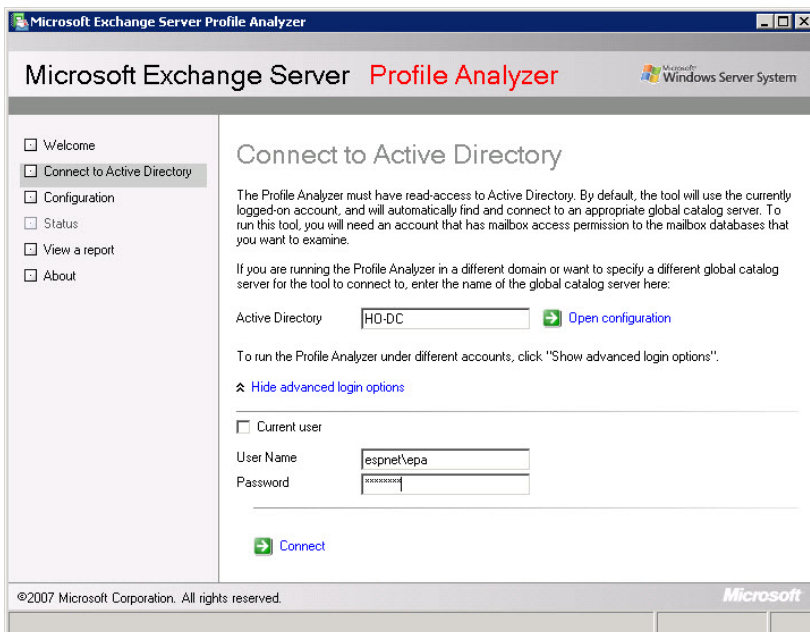
Click on **Connect** to continue. If an error appears that the topology can't be loaded you may not have the account permissions configured correctly, or you may need to wait for replication of the permissions changes to occur before trying again.

Configure the scan options. In the demonstration I am going for the most detailed analysis possibly by including individual mailbox information, and by not specifying a date range for the analysis.
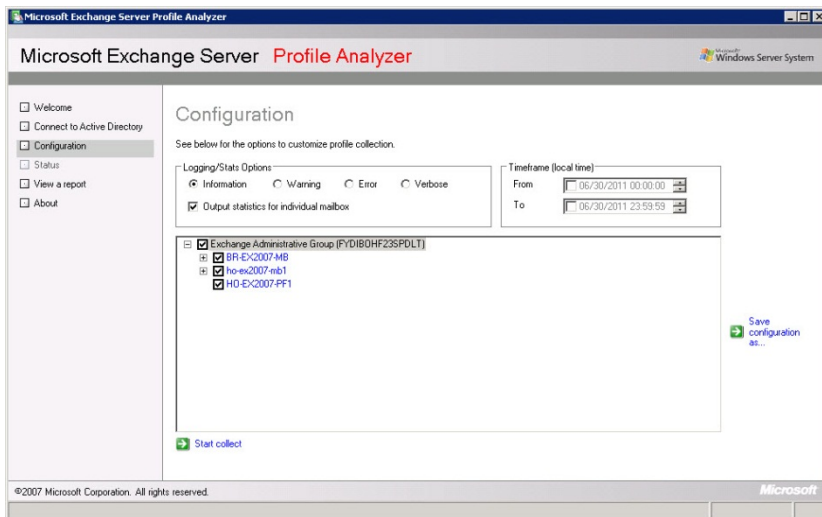
Depending on the size of your environment you may need to use a less aggressive analysis. It is also recommended that you do not start the analysis during normal business hours for your environment.

The Exchange Profile Analyzer will progress at a rate of about 500 kilobytes per second, so the total time taken to perform the analysis will depend on how large your Exchange databases are.

When you're ready to proceed with the scan click on **Start Collect**.

If the collection processes fails validation for one or more mailbox servers, double-check that you have set up the permissions correctly. You may then just need to wait for the changes to fully replicate through your environment.

After the Exchange Profile Analyzer has completed its data collection click on **View Report** to see the results.

Collect Completed

See below for the final status of each server.

→ View report

Here are some examples of the useful information that the Exchange Profile Analyzer will tell you about for your Exchange Server 2010 deployment project planning.

Mailbox size statistics let you know the average and largest mailbox sizes in the organization, as well as the total number of mailboxes and total data size.

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:	59,449,924.00

System folder sizes lets you know whether you can reduce your migration load by purging deleted items or junk mail from mailboxes.

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 statistics lets you know whether most messages in the databases are likely to contain large attachments.

As you can see the Exchange Profile Analyzer reports contain a lot of very useful information that you can use when planning your migration from Exchange Server 2007 to Exchange Server 2010.

Tip: Use the planning worksheet included with this guide to record the key statistics reported by the Exchange Profile Analyzer. You should also spend some time inspecting the report data for any anomalies or obvious issues that may impact the mailbox migration.

IDENTIFYING MAILBOX STORAGE QUOTAS

Most Exchange organizations will have storage quotas configured on the mailbox databases, because unlimited mailbox growth makes capacity planning difficult to maintain.

Exchange Server 2010 mailbox databases have a default storage quota of 2 gigabytes that is quite generous, but you still need to make sure that it is not smaller than what is currently allowed for the Exchange Server 2007 mailbox users.

You can find out the Exchange Server 2007 storage quotas using either the Exchange Management Console or the Exchange Management Shell.

In the Exchange Management Console navigate to each mailbox database, then right-click and select
Properties. On the **Limits** tab are the three mailbox storage quota settings.
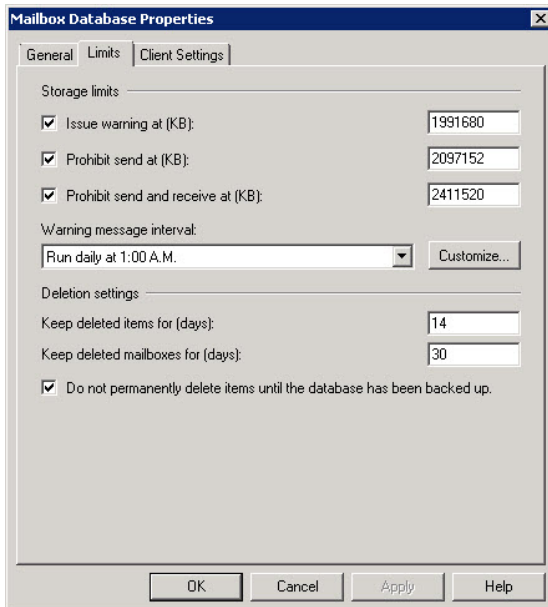
If you've got a lot of mailbox databases to inspect you may find it easier to use the Exchange Management
Shell to retrieve the quota information.

```
[PS] C:\>Get-MailboxDatabase | ft server,name,prohibit*,issue*

Server          Name            ProhibitSendRec ProhibitSendQuo IssueWarningQuo
                                eiveQuota       ta              ta
------          ----            --------------- --------------- ---------------
BR-EX2007-MB    Mailbox Data... 2355MB          2GB             1945MB
ho-ex2007-mb1   Mailbox Data... 2355MB          2GB             1945MB
```

Tip: Use the planning worksheet included with this guide to record the storage quotas
configured for each of the existing mailbox databases on Exchange Server 2007.

IDENTIFYING ROOM AND EQUIPMENT MAILBOXES AND PUBLIC FOLDERS

Exchange Server 2007/2010 both have dedicated mailbox types for managing room and resource scheduling.

These special mailboxes have additional calendar options available for them and can be configured in various ways to suit the business and lower administrative costs, such as by enabling auto-acceptance of bookings.

In Exchange Server 2003 there was only one type of mailbox available and so organizations would have to manually configure calendar permissions, and assign staff or administrators to manage bookings. In other organizations public folder calendars were used instead.

Some organizations continued to use regular user mailboxes even with Exchange Server 2007 introducing Room and Equipment mailboxes.

It is important to identify these resource mailboxes during the planning phase of the project, for the following reasons:

- To take advantage of the new features of Exchange Server 2010 by converting the mailboxes into proper Room and Equipment mailboxes after the mailbox migration is complete
- To understand whether public folders used for resource bookings need to be migrated to Exchange Server 2010

You can quickly list the Room Mailboxes by using the Exchange Management Shell.

```
[PS] C:\>Get-Mailbox | where {$_.RecipientTypeDetails -eq "RoomMailbox"}

Name                     Alias             ServerName       ProhibitSendQuo
                                                            ta
----                     -----             ----------       ---------------
BR Meeting Room 1        brmeetingroom1    br-ex2007-mb     unlimited
HO Meeting Room 1        homeetingroom1    ho-ex2007-mb1    unlimited
HO Meeting Room 2        homeetingroom2    ho-ex2007-mb1    unlimited
```

You can use a similar command to list the Equipment Mailboxes as well.

```
[PS] C:\>Get-Mailbox | where {$_.RecipientTypeDetails -eq "EquipmentMailbox"}

Name                    Alias           ServerName      ProhibitSendQuo
                                                        ta
----                    -----           ----------      ---------------
Loan Laptop 1           loanlaptop1     ho-ex2007-mb1   unlimited
Loan Laptop 2           loanlaptop2     ho-ex2007-mb1   unlimited
```

But if your organization is using standard user mailboxes for managing rooms and equipment, you may need to manually search for them. If the mailboxes all follow a similar naming standard it might make the task a bit easier.

You should consider converting the mailboxes before migrating to Exchange Server 2010, but it is not essential.

> **Tip:** Use the planning worksheet included with this guide to identify and list the room and resource mailboxes or public folder calendars in your organization.

IDENTIFYING PST FILE USAGE

PST files are a legacy hangover from years ago when Exchange servers could not handle large databases, and high speed disk storage was too expensive to allow unrestricted mailbox growth.

Exchange Server 2010 has a highly optimized database format that is designed to perform well for large mailboxes and databases even on relatively low cost disk storage.

This makes it possible to consider importing legacy PST file data back into the Exchange database where it can be properly stored for backup, discover, and more efficient archiving at a later stage. However to do this you need to understand how much PST file data exists in your environment, and be able to plan enough Exchange Server 2010 storage to accommodate it.

> **Tip:** Audit your network for PST files and make a decision as to whether they will be imported into the Exchange Server 2010 mailboxes. Use the planning worksheet included with this guide to record the results of your audit and the decision that is made about how to handle them.

IDENTIFYING PUBLIC FOLDER USAGE

Public folders are supported by Exchange Server 2010 however they are not necessarily a requirement. Microsoft has made it clear that public folders are being deprecated and so organizations that do not need them should not deploy them or begin using them.

In an Exchange Server 2010 environment there are only two reasons to consider retaining public folders:

- You have existing public folder data that is still in use by the business, and can't be migrated to a different platform such as SharePoint
- You have Outlook 2003 clients on the network which require public folders for accessing Free/Busy information

If you have existing public folder databases in your organization it is useful to check for storage limits configured on the databases.

In the Exchange Management Shell run the following command.

```
[PS] C:\>Get-PublicFolderDatabase | ft server,name,prohibit*,issue*,max*

Server          Name            ProhibitPostQuo IssueWarningQuo MaxItemSize
                                ta              ta
------          ----            --------------- --------------- -----------
HO-EX2007-PF1   Public Folde... 2GB             1945MB          10MB
BR-EX2007-MB    Public Folde... 2GB             1945MB          10MB
```

Tip: Use the planning worksheet included with this guide to record the results of your investigation into public folders in your organization.

IDENTIFYING EMAIL ROUTING TOPOLOGY

Email routing within the Exchange organization is handled by the Active Directory Sites topology, and this unchanged with Exchange Server 2010.

However the routing topology that exists outside of the immediate Exchange organization needs to be understood prior to the migration.

Exchange environments usually use one of the following inbound/outbound email topologies:

- Incoming email is received directly from the internet to a Hub Transport server, and outgoing email is sent out directly to the internet from a Hub Transport server
- Incoming email is received by a smart host (either an on-premise server or a hosted service) and then routed to a Hub Transport server, and outgoing email is sent out again via the smart host

The smart host may be a third party email security product or appliance, or an ISP hosted mail server. It is important to identify what this server or product is, as well as any firewall access that is required to connect to it, so that the email routing can be changed later on to Exchange Server 2010.

To determine your outbound email route you can use the Exchange Management Shell to list all Send Connectors for the organization.

```
[PS] C:\>Get-SendConnector

Identity              AddressSpaces Enabled
--------              ------------- -------
Internet Email Outbound {SMTP:*;1}    True
```

Running the same command piped to Format-List will give you more details about whether a smart host is used or not.

```
[PS] C:\>Get-SendConnector | fl
```

For inbound email routing, if a Hub Transport server accepts mail directly from the internet or from a smart host it likely will have its permissions configured to be enabled for Anonymous Users. You can find any Receive Connectors with this configuration by running the following Exchange Management Shell command.

```
[PS] C:\>Get-ReceiveConnector | where {$_.PermissionGroups -like "*Anonymous*"}

Identity                         Bindings         Enabled
--------                         --------         -------
HO-EX2007-HT1\Default HO-EX2007-HT1 {:::25, 0.0.0.0:25} True
```

If you still aren't sure about the routes that incoming and outgoing emails are taking in your organization you can send some test emails between an internal and external mailbox and then inspect the message headers to determine the path that they took.

> **Tip:** Use the planning worksheet included with this guide to record the details of the email routing topology. Note down the details of any non-Exchange systems involved, how they are accessed, what process is required to change their configuration, and any firewall access that is also relevant.

IDENTIFYING CLIENT SOFTWARE VERSIONS

Exchange Server 2010 is compatible with the following Microsoft Outlook versions:

- Outlook 2003 with Service Pack 2
- Outlook 2007
- Outlook 2010

In addition, Exchange Server 2010 may be used by third email clients such as:

- Apple Mail/Entourage
- POP3/IMAP4 clients

Each client version in use on the network should be identified and checked for Exchange Server 2010 compatibility

You should also look for any special configurations that may be required on Exchange Server 2010 to cater for them (e.g. POP3 and IMAP4 are not enabled by default on Exchange Server 2010, and WebDAV is not available at all).

Tip: Use the planning worksheet included with this guide to identify each of the email clients in use on the network, whether they are compatible with Exchange Server 2010, and any special server configurations that need to be made.

IDENTIFYING MAIL-INTEGRATED APPLICATIONS AND DEVICES

When you migration your organization to Exchange Server 2010 and remove the legacy servers it is very likely to cause a disruption to mail-integrated applications in your network.

To avoid such problems it is recommended that you audit your network for applications or devices that rely on the Exchange servers for their email functionality. These systems may interact with your legacy Exchange using MAPI, IMAP, POP or SMTP.

Examples of mail-integrated systems include:

- Backup servers (for emailed backup reports and notifications)
- Blackberry Enterprise Server (mobile messaging)
- Line of business (e.g. payroll and CRM)
- Telephony systems (e.g. voicemail to email, and presence)
- Microsoft SQL servers
- Third party email signature software
- Antivirus and anti-spam products
- Printers and scanners
- UPS and SANs

In some cases it may be necessary to have discussions with key people within the organization to ask them which applications and systems that they rely on day to day use email in some way.

> **Tip:** Use the planning worksheet included with this guide to identify each of the mail-integrated systems on the network, the details of how they integrate, and a plan to upgrade or migrate them for Exchange Server 2010.

IDENTIFYING PUBLIC NAMES

The public DNS names used for connecting to Exchange remotely need to be identified so that the configuration of the new Exchange servers, and the migration plan for transitioning to the new servers, are both performed correctly.

Investigate whether your organization uses Exchange remote access methods such as:

- Outlook Web Access
- ActiveSync
- RPC-over-HTTPS
- POP3 or IMAP4

In this guide we'll be using the **mail.exchangeserverpro.net** public name as an example.

> **Tip:** Use the planning worksheet included with this guide to identify each of the remote access methods used, and the public DNS names that are configured for them.

PLANNING FOR SSL CERTIFICATES

Exchange Server 2010 requires HTTPS (SSL) encrypted connections by default for certain remote access services such as Outlook Web App (OWA) and ActiveSync, as well as internal access such as Autodiscover and Exchange Web Services (EWS).

An Exchange Server 2010 server may be configured to answer to several different names, such as:

- The server's fully qualified domain name
- One or more public names such as "mail.exchangeserverpro.net"
- One or more Exchange Web Services names such as "autodiscover.exchangeserverpro.net"

To provide this functionality the Exchange server will need to be configured with a type of SSL certificate known as a Subject Alternative Names (SAN) certificate.

Although SAN certificates were recommended for use with Exchange Server 2007 there were ways to configure servers so that a SAN certificate was not required, so this concept may still be new to some Exchange administrators.

At this planning stage you need to be aware of this SSL requirement, and understand that a new certificate will likely need to be purchased from a commercial Certificate Authority. Although the cost of a few hundred dollars seems expensive, it is less than the time and effort you will spend trying to work around it.

You can use a private Certificate Authority to issue some certificates for internal servers, but that is not recommended for internet-facing servers as it will create certificate trust issues in a lot of situations.

If you want to take a look at your existing SSL certificate (if one is in use) simply browse to your current Outlook Web Access URL, and in the browser address bar click on the padlock icon.
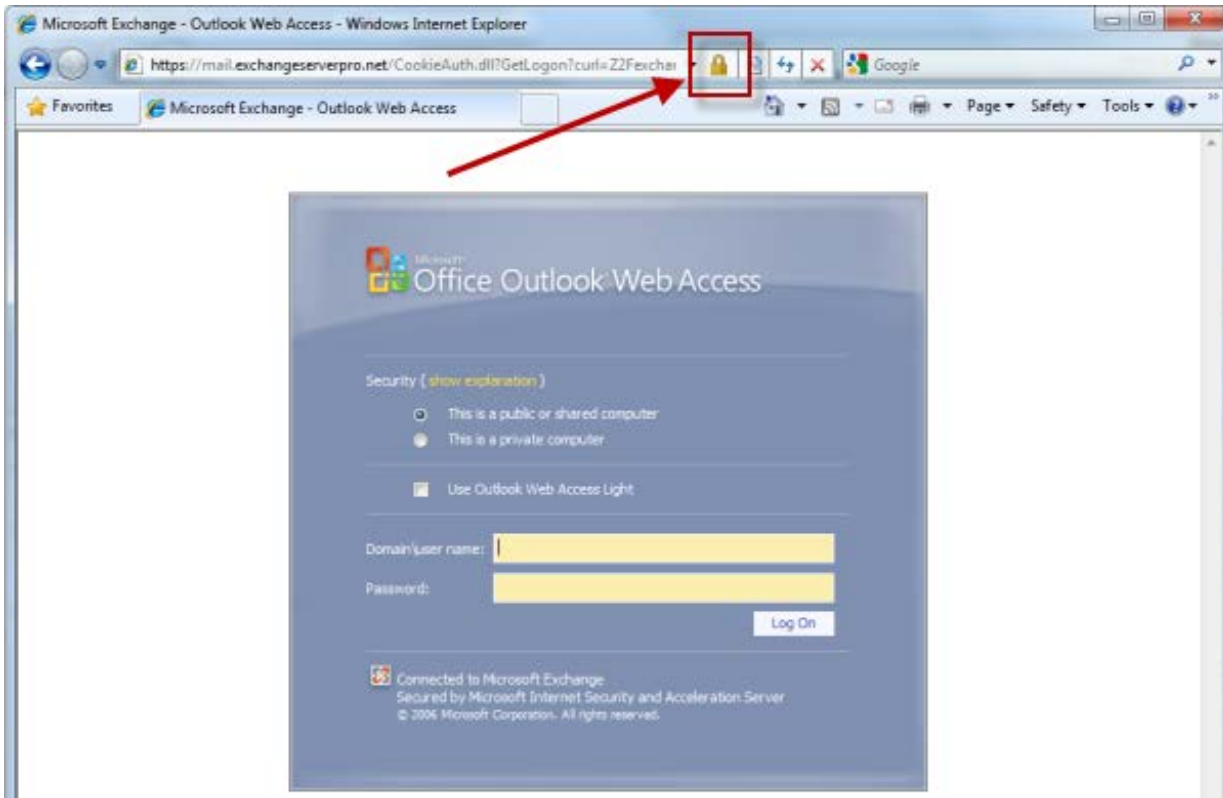
Next, click on **View Certificates** to open the certificate.
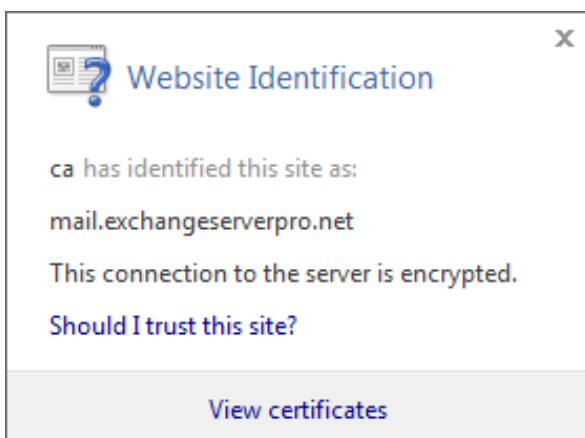
In the **Details** tab of the certificate properties click on the **Subject** field. The information in that field will be useful soon when configuring the new SSL certificate for Exchange Server 2010.
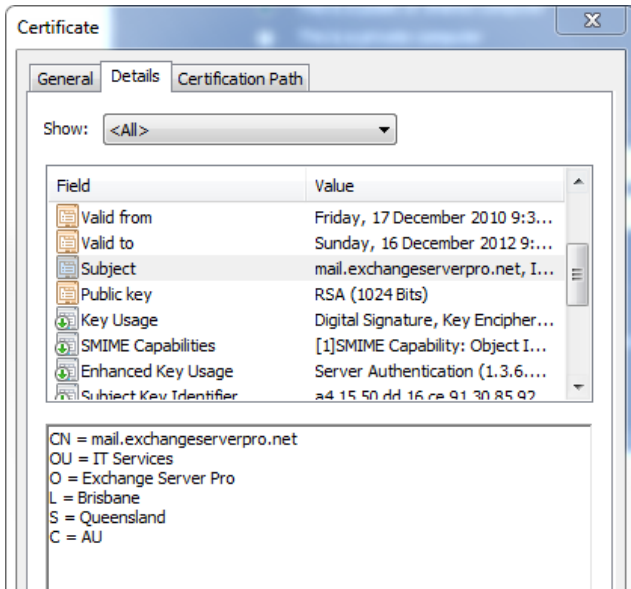
In addition to at least one new SSL certificate for your Exchange Server 2010 servers, you may also need to provision a new SSL certificate for your existing internet-facing Exchange Server 2007 Client Access server (even if it already has one).

This is only necessary if your migration project will involve a gradual migration of mailboxes over a period of days or weeks. This is known as the co-existence period.

During the co-existence period Outlook Web App is published to the Exchange Server 2010 Client Access server, which is configured with a legacy namespace to redirect Exchange Server 2007 mailbox users to the Exchange Server 2007 Client Access server.
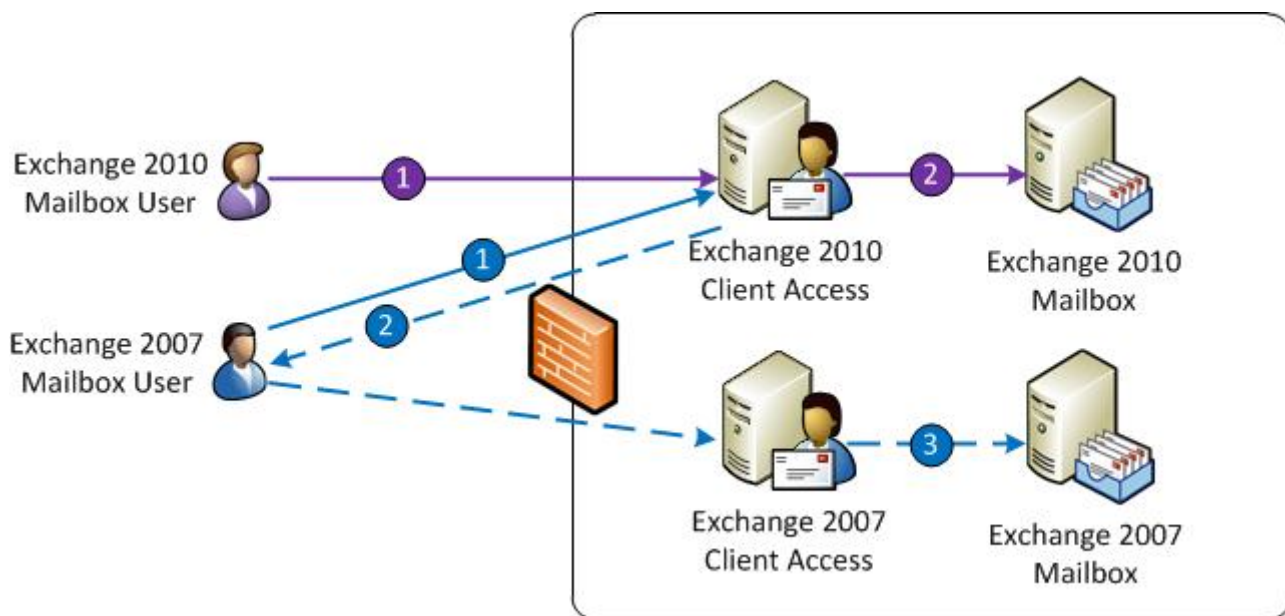
The legacy namespace is simply a DNS record that resolves to your internet-facing Exchange Server 2007 Client Access server. It can be any name you like but the convention is to use "legacy", e.g. legacy.exchangeserverpro.net.

Because this redirected connection uses SSL it requires that the Exchange Server 2007 includes that legacy name in the SSL certificate configured on the internet-facing Client Access server.

With all of these details in mind there are a few ways you can approach the provisioning of SSL certificates for your Exchange migration project. You can consider:

- Using commercially bought SAN certificates on all Exchange servers
- Using commercially bought SAN certificates only on the internet-facing Exchange servers, and privately issued SAN certificates for the internal servers
- Using privately issued SAN certificates for all servers (not recommended)

Ultimately each Client Access server needs a valid SSL certificate installed with the correct names on it.

For this guide we'll be using the following approach:

- The internet-facing Exchange Server 2007 Client Access server will have a new SSL certificate provisioned that includes the fully-qualified domain name of the server, the public names, as well as the legacy namespace
- The internet-facing Exchange Server 2010 Client Access servers will have a new SSL certificate provisioned that includes the fully-qualified domain names of the servers, as well as the public names
- The branch office Exchange Server 2010 server will have a new SSL certificate provisioned from an internal Certificate Authority that includes the fully-qualified domain name of the server
- The branch office Exchange Server 2007 server does not need any new certificates provisioned

This means that we will be provisioning the following SSL certificates:

Server	SSL Certificate Names
Head Office Exchange Server 2007 Client Access Server	ho-ex2007-ca1.exchangeserverpro.net mail.exchangeserverpro.net legacy.exchangeserverpro.net
Head Office Exchange Server 2010 Client Access Servers	ho-ex2010-caht1.exchangeserverpro.net ho-ex2010-caht2.exchangeserverpro.net mail.exchangeserverpro.net autodiscover.exchangeserverpro.net
Branch Office Exchange Server 2010 Client Access Server	br-ex2010-caht.exchangeserverpro.net

Tip: Use the planning worksheet included with this guide to record the existing SSL certificate details including the name on the certificate, the name of the provider, and the organization details. Also work out the details of each of the SSL certificates you will need to acquire for the new servers.

PLANNING IP ADDRESSES

Each of the new Exchange Server 2010 servers will need an IP address allocated to it. In addition to the normal server IP addresses you may also need additional IP addresses.

- If you are deploying a Client Access Server array using Windows NLB you will need an additional IP address for each NLB member, as well as at least one IP address for the virtual cluster IP.
- If you are deploying a Database Availability Group you will need at least one IP address to assign to the DAG, and IP addresses for any network interfaces that will be used for a dedicated replication network.

Tip: Use the planning worksheet included with this guide to record the IP addresses that you are allocating to each server.

ENVIRONMENT PRE-REQUISITES FOR EXCHANGE SERVER 2010

ACTIVE DIRECTORY PRE-REQUISITES

Active Directory requires the following to support Exchange Server 2010.

Component	Requirement
Schema Master	The Schema Master must be running one of the following operating systems: • Windows Server 2003 Standard/Enterprise with SP1 (x86 or x64) • Windows Server 2003 R2 Standard/Enterprise with SP1 (x86 or x64) • Windows Server 2008 Standard/Enterprise (x86 or x64) • Windows Server 2008 R2 Standard/Enterprise
Global Catalog	In each Site that will contain an Exchange server there must be at least one Global Catalog running one of the above operating systems.
Domain Controller	In each Site that will contain an Exchange server there must be at least one writable Domain Controller running one of the above operating systems.
Functional Level	Windows Server 2003 Functional mode or higher.

EXCHANGE ORGANIZATION PRE-REQUISITES

The existing Exchange Organization in this guide is Exchange Server 2007, and all Exchange servers must be at least Exchange Server 2007 with Service Pack 2. There are no other specific requirements however you should run the Exchange Pre-Deployment Analyzer to look for health or configuration issues that might prevent a successful migration.
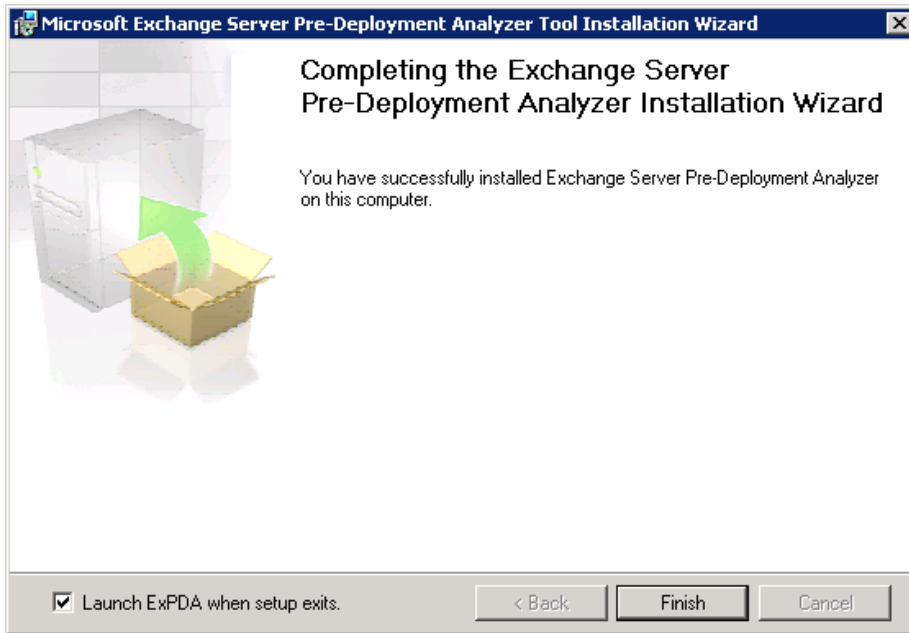
RUNNING THE EXCHANGE PRE-DEPLOYMENT ANALYZER

The Exchange Pre-Deployment Analyzer performs a readiness scan of your existing environment and reports on configuration items that are either critical (i.e. will prevent Exchange Server 2010 deployment) or warning (i.e. will not prevent deployment but may cause issues in some scenarios).

You can download the Exchange Pre-Deployment Analyzer from Microsoft and run it from any server that meets these system requirements:

- Installed operating system is either:
    - o Windows 7
    - o Windows Server 2008 R2
    - o Windows Server 2008 with SP2
    - o Windows Vista with SP2
    - o Windows Server 2003 with SP2
- .NET Framework 2.0 or later

Installation of the Exchange Pre-Deployment Analyzer is very simple. Apart from the license agreement there is nothing to configure and you can accept the default install options.

After the install is complete there is an option to launch the Exchange Pre-Deployment Analyzer immediately, or you can launch it later from the Start Menu under **All Programs → Exchange Readiness Tools**.


When you first launch the Exchange Pre-Deployment Analyzer it will ask you whether you want to check for updates, and whether you want to join the Customer Experience Improvement Program.

I recommend always checking for the latest updates before running the Exchange Pre-Deployment Analyzer, but the Customer Experience Improvement Program opt-in is up to you.
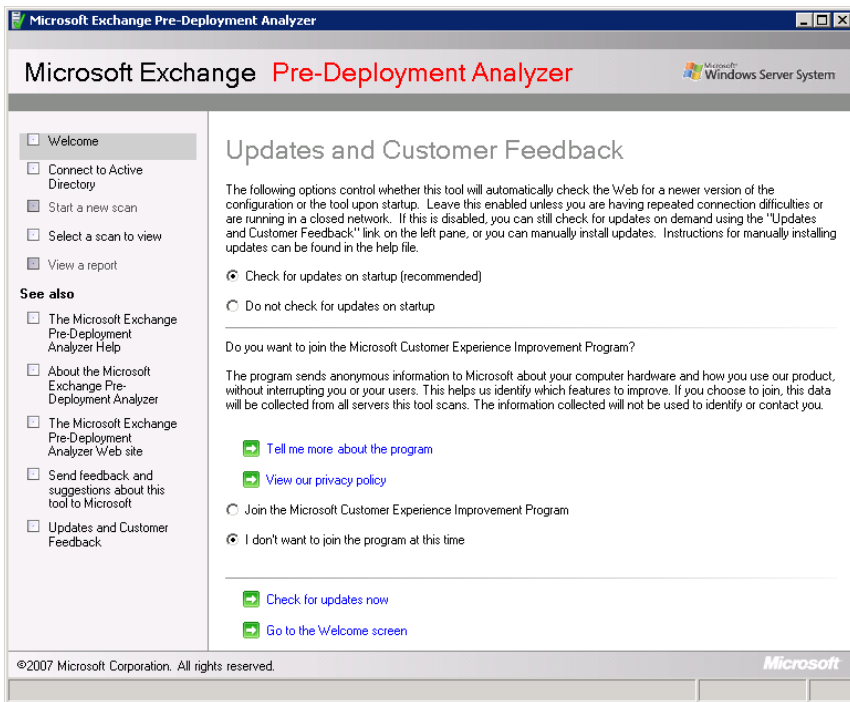
After updating the Exchange Pre-Deployment Analyzer you can run a readiness scan of the environment. Click on **Select options for a new scan**.
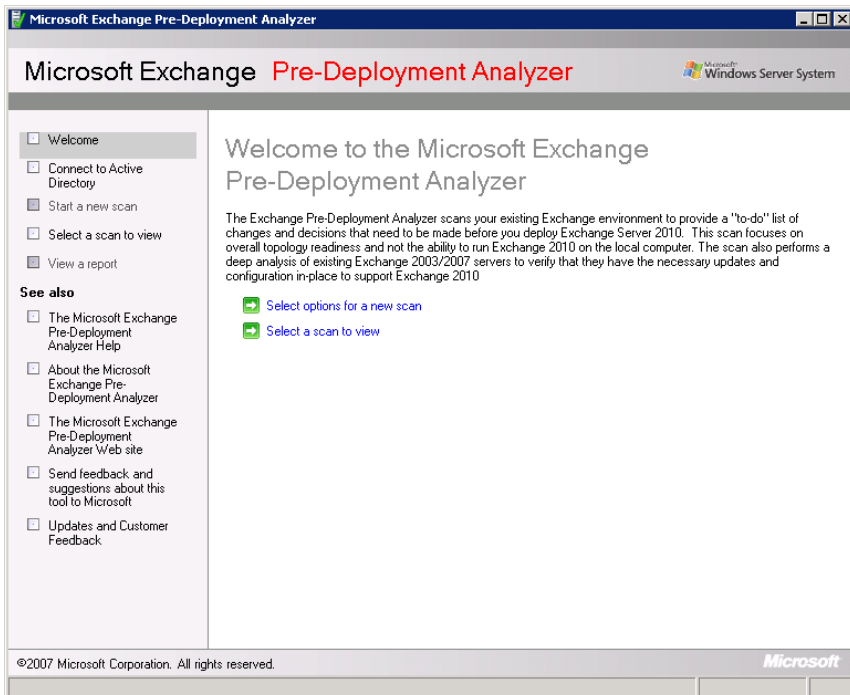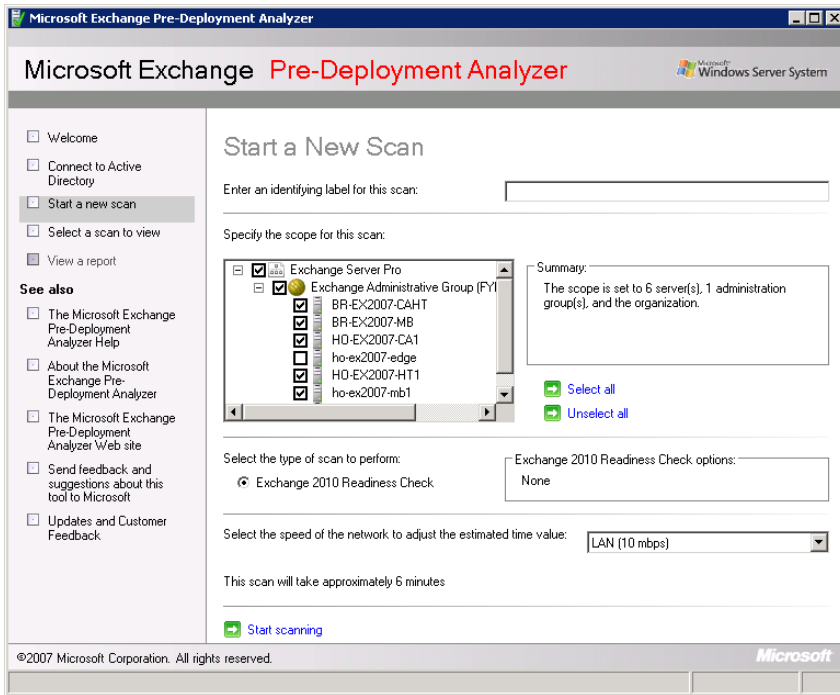
The Exchange Pre-Deployment Analyzer will select a Global Catalog server automatically to use for the scan. You can also manually specify the Domain Controller that you wish to connect to. The scan will run using the currently logged on user credentials so you also have the option to specify different credentials if your current logon does not have the necessary rights to the Active Directory.

If you're happy with the selected Domain Controller and credentials click on **Connect to the Active Directory server**.
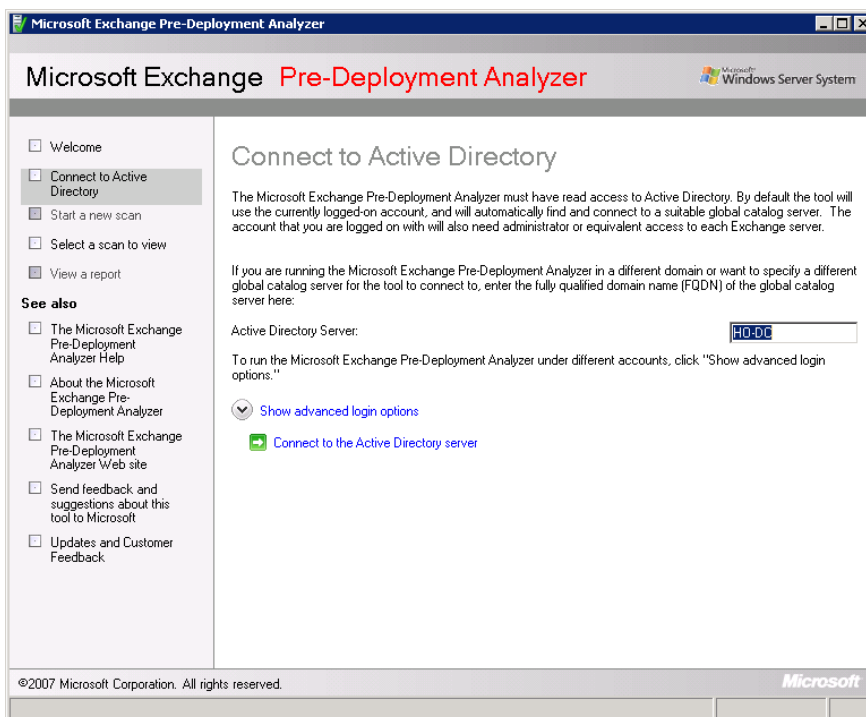

You can enter an identifying label for the scan to make it a little easier to locate the report later on, however it is optional.

The default scope for the readiness can is the entire Exchange organization. In more complex environments you might wish to limit the scope of the scan to particular servers or an administrative group, but in this example I will scan the entire organization.

When the scan is complete click on **View a report of this Best Practices scan**.
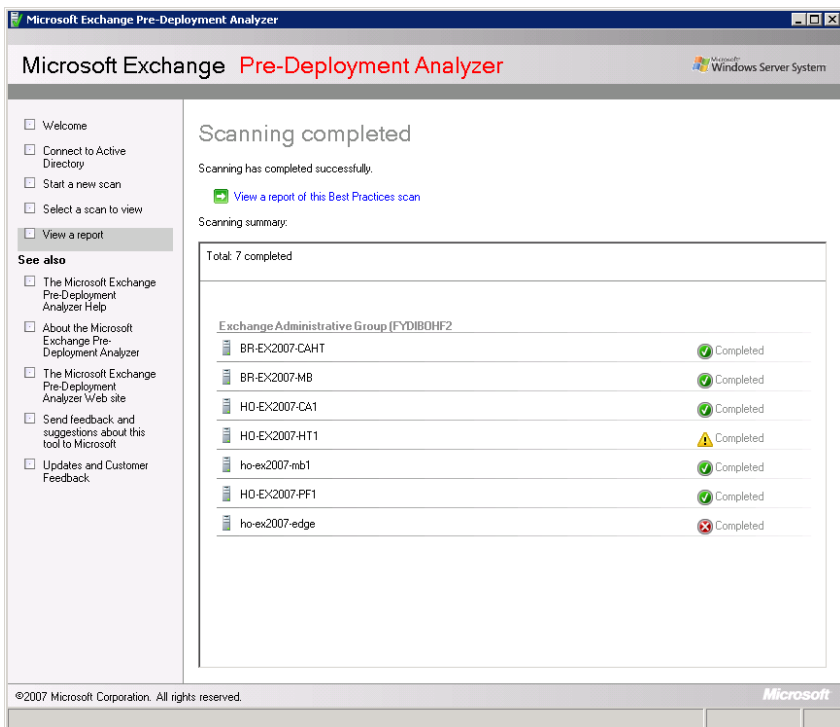
The Exchange Pre-Deployment Analyzer report will open and display the **Critical Issues**. These are the issues that will prevent an Exchange Server 2010 deployment from commencing and must be resolved before you can proceed with your deployment project. Click on any of the reported issues to see more details about that item.

The **All Issues** tab of the report will display both critical and warning items. Warning items are those issues that will not prevent an Exchange Server 2010 deployment but that may cause problems under some circumstances.
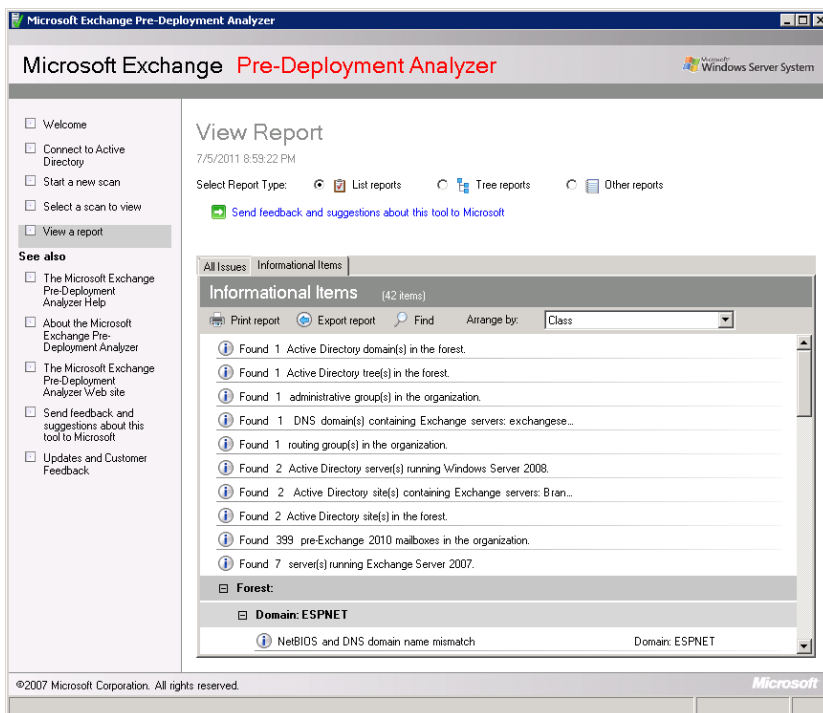
You should investigate each warning item to determine whether it applies to your situation or not. If you are uncertain then err on the side of caution and resolve the warning items before you begin the deployment project.

The **Informational Items** tab of the report presents some useful information for planning your deployment of Exchange Server 2010, such as the Active Directory domains in the Forest and the number of Exchange mailboxes in the organization.

> **Tip:** Use the planning worksheet included with this guide to note down the results of the Exchange Pre-Deployment Analyzer report, and follow the advice from Microsoft to resolve each issue.

PROJECT CHECKPOINT: PLANNING PHASE

Before proceeding further with your Exchange Server 2010 project, ensure that you have:

- ✓ Downloaded the Exchange Server 2010 SP1 software and tools (page 6)
- ✓ Run the Exchange Profile Analyzer (page 7)
- ✓ Identified mailbox storage quotas (page 13)
- ✓ Identified room and equipment mailboxes and public folders (page 15)
- ✓ Audited the network for PST file usage (page 16)
- ✓ Identified public folder usage (page 17)
- ✓ Identified the email routing topology, and the configuration processes for all involved systems (page 18)
- ✓ Identified all Outlook and other mail clients on the network (page 20)
- ✓ Identified mail-integrated applications and devices (page 21)
- ✓ Planned your SSL certificates (page 23)
- ✓ Planned your IP addresses (page 28)
- ✓ Run the Exchange Pre-Deployment Analyzer and resolved all issues (page 30)