Western Australia 2009 Daylight Saving

Planning Guide

Published: 28th September, 2009

Updated:

Abstract

Daylight Savings Time (DST) changes can have a significant impact on business performance if not dealt with proactively. These effects can range from the incorrect time display on the clock, to calendaring problems, to financial and reputation loss if business critical services fail.

Organisations need to understand impact of these changes and develop a strategy to manage the impact of DST changes to prevent systems from being adversely affected.

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INTRODUCTION

Daylight Savings Time (DST) changes can have a significant impact on business performance if not dealt with proactively. These effects can range from the incorrect time display on the clock, to calendaring problems, to financial and reputation loss if business critical services fail.

The Daylight Savings Time trial in Western Australia has now ended and this document is intended to provide guidance on understanding the impact of these changes and assist in developing a plan for mitigating the impact of the DST changes.

1 BACKGROUND

1.1 DST Changes for Western Australia

In 2006, The Parliament of Western Australia introduced **Daylight Saving Bill (No. 2) 2006** being an Act to provide for a trial period of daylight saving throughout the State and a referendum thereafter on the question of adopting daylight saving on a permanent basis, to alter standard time accordingly if the majority of electors indicates approval of daylight saving in the referendum.

The trial period of daylight saving was legislated as follows:

Despite the *Standard Time Act 2005*, from —

(a) The hour of 2:00am on 3 December 2006 until the hour of 2:00am on 25 March 2007; and

(b) The hour of 2:00am on 28 October 2007 until the hour of 2:00am on 30 March 2008; and

(c) The hour of 2:00am on 26 October 2008 until the hour of 2:00am on 29 March 2009,

Summer time shall, throughout the State, be one hour in advance of standard time and shall be observed accordingly.

In May 2009, the West Australian Electorate was polled in accordance with the Daylight Saving Bill (No.2) 2006. The result of the referendum did not return in favour of the retention of DST. Please refer to the following Electoral Commission Media release:

http://www.waec.wa.gov.au/elections/state_referendums/2009_Daylight_Saving_Referendum/media_centre.php

1.2   Impact of the Changes

The completion of the DST trial in Western Australia and the subsequent referendum has effectively resulted in the abolishment of the implementation of DST. The implication of this is that the Western Australian time zone shall revert to conforming to the *Standard Time Act of 2005,* which states:

"Standard time throughout Western Australia is 8 hours in advance of Co-ordinated Universal Time."

DST changes can have a significant impact on business performance if not dealt with proactively.

Most IT systems are affected – including Microsoft Windows operating systems, Microsoft Office Outlook, other Microsoft products, as well as third party and custom applications. These effects can be loosely categorised into three main categories:

Category	Example	Possible Impacts
Operating Systems	Local System time, System logs and file system time stamps.	• Applications relying on local time from the Operating system will have the incorrect time. • Incorrect audit information. • Document versioning using time stamps incorrect.
Scheduling and Calendaring	Applications used to schedule resource, meetings or activities. Includes Outlook and exchange.	• Internal and external resource bookings errors. • Mismatched meeting scheduling.
Time Dependent Applications	Any application reliant on time information for correct function such as billing systems.	• Dependant on the specific application.

For a detailed discussion on these impacts refer to Appendix A – Detailed Discussion of the Impact Of The DST Changes.

2   DAYLIGHT SAVINGS PLANNING

Daylight savings changes have created a number of complex issues. Depending on each organisation's specific infrastructure, applications and desktop environment, they each will be in a slightly different situation.

The development of an organisation specific DST Update Response plan is a significant task that needs to be undertaken well in advance of the new daylight savings dates. The importance in careful planning prior to the daylight savings "delta" periods cannot be over emphasised if the organisation is to prevent daylight savings related issues.

Beyond the initial planning, the ongoing consideration of daylight savings changes needs to be incorporated into standard operating practices. If organisations wish to avoid further complicating an already complex situation they must strive to achieve consistency of DST update installation on all workstations by deploying fully updated systems and ensuring full delivery of updates to existing systems.

To assist organisations develop their DST Response plan the following have been included as appendices to this document:

- Appendix C - Building your DST Update Response Plan

- Appendix D - DST Update Response Plan Considerations

- Appendix E - Sample Assessment Worksheets

- Appendix F - Sample Communications Plan

- Appendix G - Sample Deployment Plan

- Appendix H - References and Useful Websites

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Microsoft has provided a number of updates for products in response to the daylight savings changes, and will continue to release updates regularly.

3.1 Recommended Update Sequence

Implementing the correct updates/workarounds in the correct sequence is required to successfully mitigate the impact of daylight savings changes. The following table lists the recommended steps to apply the DST updates/workarounds.

Step	Notes
Install DST updates to all Windows Server Operating Systems (KB974176) **NOTE:** Users who install this hotfix on operating system platforms down level from Windows Vista require an extra step to obtain the 2010 part of the Western Australia DST fix. These users need to install the upcoming 2009 December DST Cadence Release prior to 7th January 2010. By doing this, the user would have installed the complete DST fix for Western Australia that removes Daylight Saving time for the Western Australia time zone.	Only servers in affected time zones or servers that host applications which support the affected time zones need to be updated – this includes servers that work with the affected time zones. If you are based in Western Australia and you have servers in the US for example, these will also need to be updated. Microsoft **RECOMMENDS** applying time zone updates to all Windows systems as good practice and to prevent issues if time zone-dependent applications are installed now or in the future. The installation order between DC's, File and Print, Terminal Servers, Application, Exchange and Database servers does not matter, although it is a recommended practice to install the DST updates on DC's first. Only Domain Controllers (DCs) in affected time zones HAVE to be updated, but recommended practice is that any change which has been tested and approved for a DC in an organization should be applied to ALL DCs. Windows SharePoint Services (WSS) has its own time zone tables so in theory its host server does not need to be updated, but Microsoft **RECOMMENDS** that all servers are consistently updated. **IMPORTANT NOTES:** 1. DST updates are only available for the following versions of Windows:

	• Windows Server 2008 • Windows Server 2008 Service Pack 1 • Windows Server 2008 Service Pack 2 • Windows Server 2008 R2 • Windows Server 2003 Service Pack 2 For Windows Server 2003 RTM and Service Pack 1, and Windows Server 2000 RTM, Service Pack 1, Service Pack 2, and Service Pack 3, no DST updates are available as these versions of Windows are no longer supported by Microsoft, in accordance with the Microsoft Product Support Lifecycle. For Windows 2000 Service Pack 4, no DST update is available as this version of Windows is no longer in the Mainstream Support phase of Microsoft Product Lifecycle. For more information, please refer to Microsoft Product Support Lifecycle Policy. There are two options to apply the DST changes on these versions of Windows: • Contact your Microsoft representative to purchase an Extended Hotfix Support Agreement (EHSA) for Windows 2000 Server Service Pack 4. • Download TZEdit Tool from the Microsoft Download Center to create manual updates for Windows 2000 Server and Windows Server 2003. For more information, please refer to KB914387. For details, please refer to **Section 4: Preparing Windows Operating System for Daylight Savings Changes in Western Australia** 2. For KNOWN issues in KB974176, please refer to **Section 4: Preparing Windows Operating System for Daylight Savings Changes in Western Australia**. It is very important to understand the known issues with DST updates before implementing them into production environments.
Install DST update to all Windows workstations (KB974176)	Client systems which use Outlook via Terminal Services should be updated as soon as possible after the Terminal Servers are updated to avoid discrepancies between DST rules. It is a recommended practice to update all client operating systems within a short as possible time frame, again to avoid conflicts with DST changes between clients. **IMPORTANT NOTES:** 1. DST updates are only available for the following versions of

	Windows: • Windows 7 • Windows Vista • Windows Vista Service Pack 1 • Windows Vista Service Pack 2 • Windows XP Service Pack 2 • Windows XP Service Pack 3 For Windows 2000 Workstation, no DST update is available as this version of Windows is no longer in the Mainstream Support phase of Microsoft Product Lifecycle. For more information, please refer to Microsoft Product Support Lifecycle Policy. There are two options to apply the DST changes on this version of Windows: • Contact your Microsoft representative to purchase an Extended Hotfix Support Agreement (EHSA) for DST. • Download TZEdit Tool from the Microsoft Download Center to create updates for Windows 2000. For more information, please refer to KB914387. For details, please refer to **Section 4: Preparing Windows Operating System for Daylight Savings Changes in Western Australia** 2. For KNOWN issues in KB974176, please refer to **Section 4: Preparing Windows Operating System for Daylight Savings Changes in Western Australia**. It is very important to understand the known issues with DST updates before implementing them into production environments.
Check Exchange Servers and Outlook Clients	Exchange Servers and Outlook clients utilize Windows system time for appointments and meeting requests. After installing Windows update KB974176, Exchange Servers and Outlook clients will automatically detect the Windows system time change and do corresponding changes on Start and End time of appointments and meetings. For details, please refer to **Section 5: Preparing Exchange Server and Outlook for Daylight Savings Changes in Western Australia**. **IMPORTANT NOTES:** For meeting requests created by a system set to Perth time zone prior to having the DST update installed, the UTC time of the meeting requests received by Exchange Server will be Perth time -9 hours. Thus, when other regions' recipients receive them, the

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	time they see is the UTC time + their time zone. So, after the DST update is applied, the Perth time zone is GMT+8 instead of GMT + (8+1), therefore, all meeting requests created before the DST update was applied will be shifted to 1 hour earlier than the previous time.
Remediate any 3rd party applications if the vendor has provided a DST update	If 3rd party vendors have provided DST updates for their applications, please also install these updates in accordance with their deployment guidelines.
Implement updates for Windows SharePoint Services (WSS)/ SharePoint Portal Server (SPS) 2003/Microsoft Office SharePoint Portal Server (MOSS) 2007	Updates for WSS/SPS/MOSS are not currently available. Most of the WSS functions on based on Windows system time. The current recommendation is to install Windows update KB974176 and modify the configuration in TIMEZONE.XML for WSS servers. For details, please refer to **Section 6: Preparing Windows SharePoint Services for Daylight Savings Changes in Western Australia**.
Implement solution for Windows Mobile devices	Updates for Windows Mobile 5.x and 6.x are now available by contacting Microsoft Support or your Technical Account Manager for Premier Support customers. The knowledgebase article should be live by the end of September and will be KB975353. For details, please refer to **Section 7: Preparing Windows Mobile for Daylight Savings Changes in Western Australia**.

NOTE: Microsoft recommended practice is to maintain a consistent level of DST updates across all systems in the enterprise. For multinational organisations or organisations that span multiple time zones it is recommended to continue to apply DST updates to all systems as they are released.

Recurring appointments which fall within the DST delta will need to be rebased for all meeting attendees if they are in, or interact with attendees in, the changed time zone. For many organisations this may affect senior staff and you should pay particular attention to this scenario to avoid potential business impact.

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4   PREPARING WINDOWS OPERATING SYSTEMS FOR DAYLIGHT SAVINGS IN WESTERN AUSTRALIA

This section provides guidance on preparing Windows Operating Systems for changes to Western Australia Daylight Savings in 2009.

The versions of Windows Operating Systems that need to implement DST updates or solutions are:

- Windows 7
- Windows Vista
- Windows Server 2008
- Windows Server 2008 R2
- Windows Server 2003
- Windows Server 2003 R2
- Windows XP
- Windows 2000

Windows System time zone information is maintained in the registry key:

HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows NT\CurrentVersion\Time Zones

All the DST settings change will be reflected in the key or values under this key.

4.1   Apply Hotfix KB974176 for the updated WA DST Changes

To apply this hotfix, you must be running one of the following operating systems:

- Windows 7
- Windows Server 2008 Service Pack 1
- Windows Server 2008 Service Pack 2
- Windows Server 2008 R2
- Windows Server 2003 Service Pack 2
- Windows Vista
- Windows Vista Service Pack 1
- Windows Vista Service Pack 2
- Windows XP Service Pack 2
- Windows XP Service Pack 3

For the above operating systems we can directly install the appropriate hotfix package as per the following table:

Product	Locale	Build	Platform	Package
Windows 7	All (Global)	7600	x86	392399_intl_i386_zip
Windows 7	All (Global)	7600	ia64	392404_intl_ia64_zip
Windows 7	All (Global)	7600	x64	392403_intl_x64_zip

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Windows Server 2008 R2	All (Global)	7600	x86	392399_intl_i386_zip
Windows Server 2008 R2	All (Global)	7600	ia64	392404_intl_ia64_zip
Windows Server 2008 R2	All (Global)	7600	x64	392403_intl_x64_zip
Windows Server 2008	All (Global)	6000	x86	Same as the Vista Pack
Windows Server 2008	All (Global)	6000	ia64	Same as the Vista Pack
Windows Server 2008	All (Global)	6000	x64	Same as the Vista Pack
Windows Server 2003	Language Specific	3790	x86	391856_ENU_i386_zip
Windows Server 2003	Language Specific	3790	ia64	391870_ENU_ia64_zip
Windows Server 2003	Language Specific	3790	x64	391876_ENU_x64_zip
Windows Vista	All (Global)	6000	x86	392183_intl_i386_zip
Windows Vista	All (Global)	6000	ia64	392150_intl_ia64_zip
Windows Vista	All (Global)	6000	x64	392197_intl_x64_zip
Windows XP	Language Specific	2600	x86	391949_ENU_i386_zip
Windows XP			x64	Use Windows Server 2003 x64 package

4.2   Manual Methods to Perform DST Changes on Windows 2000

As Windows 2000 is in the Extended Support phase no DST update will be released as per Microsoft Lifecycle Policy, so we need to utilize the manual method as documented in KB914387:

How to configure daylight saving time for Microsoft Windows operating systems
http://support.microsoft.com/kb/914387

Prepare three files based on the source outlined below:

974176TZUpdateWAus2009.reg
This will be the Time Zone update registry file (For use only on English builds of Windows). It will change the time zone and DST setting for Western Australia in the same manner as KB974176, and should not be altered in any way.

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```
Windows Registry Editor Version 5.00

[HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows NT\CurrentVersion\Time Zones\W.
Australia Standard Time]

"Display"="(GMT+08:00) Perth"

"Dlt"="W. Australia Daylight Time"

"Std"="W. Australia Standard Time"

"MapID"="16,17"

"Index"=dword:000000e1

"TZI"=hex:20,fe,ff,ff,00,00,00,00,c4,ff,ff,ff,00,00,03,00,00,00,05,00,03,00,00,\
  00,00,00,00,00,00,00,01,00,04,00,01,00,00,00,00,00,00,00,00


[HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows NT\CurrentVersion\Time Zones\W.
Australia Standard Time\Dynamic DST]

"FirstEntry"=dword:000007d5

"LastEntry"=dword:000007da

"2005"=hex:20,fe,ff,ff,00,00,00,00,c4,ff,ff,ff,00,00,00,00,00,00,00,00,00,00,\
  00,00,00,00,00,00,00,00,00,00,00,00,00,00,00,00,00,00,00,00,00

"2006"=hex:20,fe,ff,ff,00,00,00,00,c4,ff,ff,ff,00,00,01,00,00,00,01,00,00,00,\
  00,00,00,00,00,00,00,00,0c,00,00,00,01,00,02,00,00,00,00,00,00,00

"2007"=hex:20,fe,ff,ff,00,00,00,00,c4,ff,ff,ff,00,00,03,00,00,00,05,00,03,00,\
  00,00,00,00,00,00,00,00,0a,00,00,00,05,00,02,00,00,00,00,00,00,00

"2008"=hex:20,fe,ff,ff,00,00,00,00,c4,ff,ff,ff,00,00,03,00,00,00,05,00,03,00,\
  00,00,00,00,00,00,00,00,0a,00,00,00,05,00,02,00,00,00,00,00,00,00

"2009"=hex:20,fe,ff,ff,00,00,00,00,c4,ff,ff,ff,00,00,03,00,00,00,05,00,03,00,\
  00,00,00,00,00,00,00,00,01,00,04,00,01,00,00,00,00,00,00,00,00,00

"2010"=hex:20,fe,ff,ff,00,00,00,00,c4,ff,ff,ff,00,00,00,00,00,00,00,00,00,00,\
  00,00,00,00,00,00,00,00,00,00,00,00,00,00,00,00,00,00,00,00,00
```

refreshTZinfo_WAus.vbs

The DST and time zone settings registry must be updated in two locations to become active. Importing the 974176TZUpdateWAus2009.reg file updates the time zone database in the registry and is the first step required. You must then update the TimeZoneInformation registry key in the *<current control set>* key.

The following script will identify the current time zone of the client computer and then reload the TimeZoneInformation registry key with the updated information from the time zone database.

The script contains some logging, as it writes an event to the Application log of the client computer where the script was run to report the status of the installation - Event ID 1 is reported when there was some form of failure, or Event ID 4 is reported on success. You may modify or extend this script as you see fit to perform any additional logging or reporting you require.

```
Set objSh = CreateObject("WScript.Shell")


'Get the StandardName key of the current time zone

szStandardName =
objSh.RegRead("HKLM\SYSTEM\CurrentControlSet\Control\TimeZoneInformation\StandardName")


'Enumerate the subkeys in the time zone database

const HKEY_LOCAL_MACHINE = &H80000002

Set
objReg=GetObject("winmgmts:{impersonationLevel=impersonate}!\\.\root\default:StdRegProv")

szTzsKeyPath = "SOFTWARE\Microsoft\Windows NT\CurrentVersion\Time Zones"

objReg.EnumKey HKEY_LOCAL_MACHINE, szTzsKeyPath, arrTzSubKeys


'Step through the time zones to find the matching Standard Name

szTzKey = "<Unknown>"

For Each subkey In arrTzSubKeys

   If (objSh.RegRead("HKLM\" & szTzsKeyPath & "\" & subkey & "\Std") = szStandardName) Then

      'Found matching StandardName, now store this time zone key name

      szTzKey = subkey

   End If
```

```
Next




If szTzKey = "<Unknown>" Then

    'Write entry to the Application event log stating that the update has failed to execute

    objSh.LogEvent 1, "DST 2009 Registry Update and Refresh failed to execute on this computer.
Time zones failed to enumerate properly or matching time zone not found."

    Wscript.Quit 0

End If



Dim process, processid, result, strUpdateCommand

Set process =
GetObject("winmgmts:{impersonationLevel=impersonate}!\\.\root\cimv2:Win32_process")



'Add time change privilege to the process object

process.Security_.Privileges.AddAsString "SeSystemTimePrivilege",True

strUpdateCommand = "control.exe timedate.cpl,,/Z" & szTzKey



'Launch control.exe to refresh time zone information using the TZ key name obtained above

result = process.create(strUpdateCommand,Null,Null,processid)

If result <> 0 Then

        objSh.LogEvent 1, "DST 2009 Registry Update and Refresh failed to execute on this
computer.  Unable to refresh the Timezone database."

    Wscript.Quit 0

End If



'Get current display name of refreshed time zone

szCurrDispName = objSh.RegRead("HKLM\" & szTzsKeyPath & "\" & szTzKey & "\Display")
```

```
'Write entry to the Application event log stating that the update has executed

objSh.LogEvent 4, "DST 2009 Registry Update and Refresh has been executed on this computer." &
chr(13) & chr(10) & chr(13) & chr(10) & "Current time zone is: " & szCurrDispName & "."
```

Note: Microsoft provides programming examples for illustration only, without warranty either expressed or implied. This includes, but is not limited to, the implied warranties of merchantability or fitness for a particular purpose.

WAusTZUpdate.cmd
This is a batch file that will execute the above scripts sequentially. This will most likely be used in environments that require an automated deployment methodology across multiple machines, such as Group Policy. It states the location of the above files is \\contoso.com\NETLOGON\ which should be updated to reflect your own environment.

```
@echo off

regedit /s \\contoso.com\NETLOGON\974176TZUpdateWAus2009.reg

cscript \\contoso.com\NETLOGON\refreshTZinfo_WAus.vbs
```

4.2.1   Deploying the manual update on a single computer

To deploy the update on a single computer, create or copy the first two files from above to an accessible location. Double-click on the .reg file, and then double-click on the .vbs script, to add the new time zone information to the registry and make it active. The DST settings will be changed in accordance with KB914387.

4.2.2   Deploying the manual update on multiple computers

The following steps will assist guiding you in deploying the update to multiple computers using Group Policy Objects. These steps outline the basic approach to take, but all actions should be carried out in accordance with your established standards and change management practices. For other environments, you can use the scripts provided earlier and an installation/execution method of your choosing.

1. Decide an appropriate location to contain the script files within your Netlogon folder of the domain controller that holds the PDC emulator role in the domain.

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2. Ensure the WAusTZUpdate.cmd file contains the full path to both the .reg file and the .vbs file as decided in Step 1.

3. Copy the following files to the chosen location:

    -   974176TZUpdateWAus2009.reg
    -   refreshTZinfo_WAus.vbs
    -   WAusTZUpdate.cmd

4. Wait until Active Directory replication occurs and the files and folders in the system volume (SYSVOL) shared folder replicate to all domain controllers in the domain.

5. Click Start, click Run, type 'control admintools', and then click OK.

6. Double-click Active Directory Users and Computers.

7. Select an OU that contains the computers that you want to apply this script to. In this example, we will use an OU that is named DST_Waus. This example also assumes that this OU contains only computer accounts.

8. Right-click the DST_Waus OU, and then click Properties.

9. Click the Group Policy tab, click New, type WA 2009 DST Registry Update, and then press ENTER.

10. Click Edit. The Group Policy Object Editor tool starts.

11. Expand Computer Configuration, expand Windows Settings, and then click Scripts (Startup/Shutdown).

12. Double-click Startup, and then click Add.

13. In the Script Name box, type the universal naming convention (UNC) path of the WAusTZUpdate.cmd file location within the Netlogon share as decided in Step 1. For example, type \\contoso.com\NETLOGON\WAusTZUpdate.cmd

14. Click OK two times.

Once this is completed and AD replication has completed, all client computers that are within the DST_WAus OU will run the DST update startup script the next time that they restart, and any that are located within the Perth GMT+8 time zone will observe the new DST settings.

4.3 Known issues when installing KB974176 or performing the manual registry update.

1. After installing KB974176 on Windows Vista and Windows Server 2008 (excluding Windows Server 2008 R2), you may see the following information in the Date and Time configuration window,

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*"**Daylight Saving Time end on [Date out of range] at 0:00. The clock is not set to adjust for this change**."*

This is a display error only with no functionality impact and can be safely ignored. This will be resolved in the upcoming December cumulative time zone update.

2. On Window XP, 2000 and 2003, after installing the hotfix or using manual method to update DST, you may find the "Automatically adjust clock for daylight saving changes" option is still available in the Date and Time Properties window. This is an expected behaviour. In order to preserve the integrity of a number of Windows APIs used by numerous applications (e.g. Windows Explorer and Outlook) that incorporate DST in the data they return, it is necessary to preserve DST for the period 1st January 2009 to 28th March 2009 period. Microsoft will be publishing a December DST cumulative update that once deployed will completely remove DST in line with the requirements for 2010 onwards.

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5 PREPARING EXCHANGE SERVER AND OFFICE OUTLOOK FOR DAYLIGHT SAVINGS IN WESTERN AUSTRALIA

This section provides guidance on preparing Microsoft Exchange Server for changes to Western Australia Daylight Savings in 2009.

The versions of Microsoft Exchange Server that need to implement DST updates or solutions are:

- Microsoft Exchange Server 2007 Enterprise Edition
- Microsoft Exchange Server 2007 Standard Edition
- Microsoft Exchange Server 2003 Enterprise Edition
- Microsoft Exchange Server 2003 Standard Edition

Exchange Servers utilize the system time zone data to convert the Start and End time of meeting requests to UTC time which are then stored in the Exchange database. When clients view the meeting request or appointment, the Start and End time will be converted back to the local time based on the client time zone setting. To completely address DST in an Exchange environment it is necessary to update both the operating system of both the Exchange Server and the client machines.

Calendaring in particular is affected by changes to time zones and DST. There are two primary methods of addressing calendaring discrepancies:

- Engaging with all staff members in affected time zones to be vigilant of their calendar and manage the DST transition using the recommended practices detailed in Section 5.3

- Calendar rebasing utilizing tools detailed in Section 5.4 below.

5.1 Apply Cumulative Time Zone Update for Windows operating system

Section 4 of this document outlines how to remediate Windows operating systems. Please follow the necessary steps on all servers where you have Exchange Server installed, as well as all workstations, before you proceed with next step.

5.2 Exchange Server 2003 may need to be updated for CDO

Previously, Exchange Server 2003 used hard-coded tables to store the time zone information. These static tables are used across the different components of Exchange Server 2003. In the past, if the definition for an existing time zone had to be changed, a change had to be made to the hard-coded time zone tables in CDO, and then a CDO hotfix had to be released. Microsoft has released the hotfix in KB924335 to allow CDO time zone values to be read dynamically from Windows time zone information during a service restart. Please ensure hotfix KB924335 is installed on all Exchange 2003 Servers so CDO on those servers can read the updated DST information for Western Australia from

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the operating system. This hotfix was released in August 2008 and therefore may have already been deployed in your environment.

CDO time zone tables cannot be automatically updated from the registry values of the Windows operating system on Exchange Server 2003
http://support.microsoft.com/kb/924335

5.3   Recommended practices for managing calendaring during DST transition

- Establish a comprehensive communications plan to build awareness of the DST transition and the potential impacts to their calendar.

- Recommend that the meeting request contains the time and time zone (e.g. 10am-11am Perth time) of the meeting within the subject or body of the request.

- For meetings that were created prior to the DST update being applied and that have attendees from other time zones, reconfirm the meeting schedule prior to the meeting – for example 24 hours before a telephone conference or undertaking travel.

- Print calendars prior to deployment of workstation operating system DST updates, and re-validate any meeting requests that appear at a different time.

5.4   Calendar rebasing for meeting requests

Based on experience of many customers over previous DST transition events, calendar rebasing activities carry a reasonable degree of risk and effort. With this in mind, customers should evaluate their need to perform the calendar rebasing or to implement alternate manual strategies to address calendar discrepancies. Review the content in KB941018 and KB931667 to evaluate the implications of calendar rebasing and it's applicability in your environment.

After the appropriate DST update is applied on the clients and servers and the CDO update is applied if required, all previously created (recurring or non-recurring) meeting requests scheduled to occur during the DST period will be displayed 1 hour earlier for Western Australian users. For example, a meeting originally scheduled at 9am will then be displayed as occurring at 8am after the update is installed. Therefore, administrators may need to rebase those meeting requests so the time is consistent.

However, administrators should be aware that after rebasing, the meeting time for non-WA attendees will be 1 hour later than the previous schedule in their calendars.

For example, before the Operating System DST update is installed, a Perth meeting organiser (GMT+9) sends a meeting request for a meeting in November (i.e. after the DST transition date of all eastern Australian states) to a Sydney attendee (GMT+11) and a Shanghai attendee (GMT+8). The time of the meeting is planned to be 3pm – 4pm Perth time. The time of the meeting shown to the Sydney attendee is 5pm – 6pm, and the Shanghai attendee is 2pm – 3pm. The meeting times shown

for the Sydney and Shanghai attendees are incorrect as they are based on the incorrect UTC offset from the meeting organiser's Perth Operating System DST settings.

After the DST update is installed on all of the workstations, the time of the meeting for Shanghai and Sydney users won't change. However, the meeting time of the Perth user will appear as 2pm – 3pm (same as the Shanghai GMT +8 time zone). This is not as the Perth meeting organiser expected, and is the reason that Calendar Rebasing is performed. After rebasing the Perth user's calendar, the meeting time for 3 users will be:

Perth: 3:00pm – 4:00pm

Sydney: 6:00pm – 7:00pm

Shanghai: 3:00pm – 4:00pm

Therefore, we can see the meeting time will then be consistent for the organizer (Perth user) before and after the DST update is applied, and reflects the intended meeting time. However, the attendees' meeting request time has moved to 1 hour later after the rebasing, which means that the conditions of their initial meeting acceptance may no longer be valid.

5.4.1   Type of rebasing tools

We have two types of rebasing tools:

1. Exchange Calendar Update Tool

    How to address daylight saving time by using the Exchange Calendar Update Tool
    http://support.microsoft.com/kb/941018

2. Time Zone Data Update Tool for Microsoft Office Outlook

    How to address time zone changes by using the Time Zone Data Update Tool for Microsoft Outlook
    http://support.microsoft.com/kb/931667

Please see section 5.5 for details of known issues when using either of these two rebasing tools.

5.4.1.1   *Using the Exchange Calendar Update Tool*

1. Choose a client machine with the following installed:

    a. Outlook 2003 or Outlook 2007 with the latest Service Pack applied.

    b. Exchange and Outlook Update Tools from KB941018 and KB931667.

    c. .NET Framework2.0

2. For Exchange Server 2003 SP2, install updates KB911829 and KB924334 on the server.

3. Create an Outlook online profile for the Windows logon user and grant the user the following permissions:

a. "Administer Information Store" permissions on each Exchange Server message database (MDB).

b. "Send As" permissions for all mailboxes to be updated.

c. "Full Mailbox Access" permissions for all mailboxes to be updated.

d. Local administrator permissions, on the computer that is running the Exchange tool.

4. Run MSextmzcfg.exe tool on the client:

a. Start Exchange Calendar Update Configuration Tool and click Next
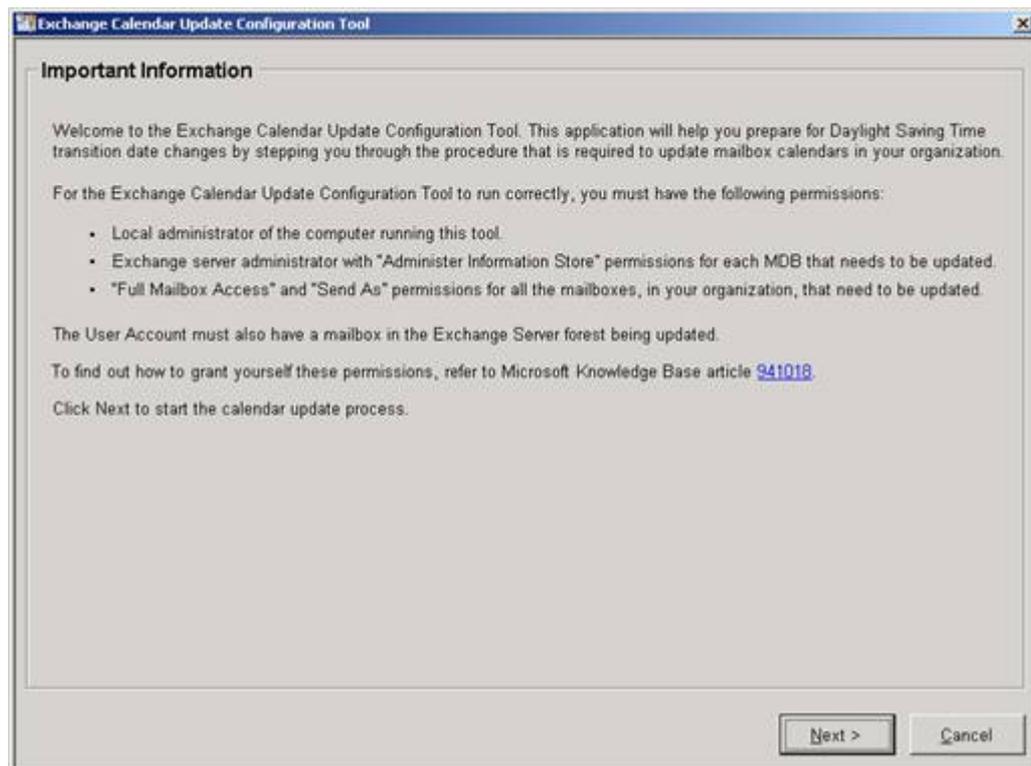
b. In logging settings, select the logging level you require. Click Advanced Settings to specify any additional settings

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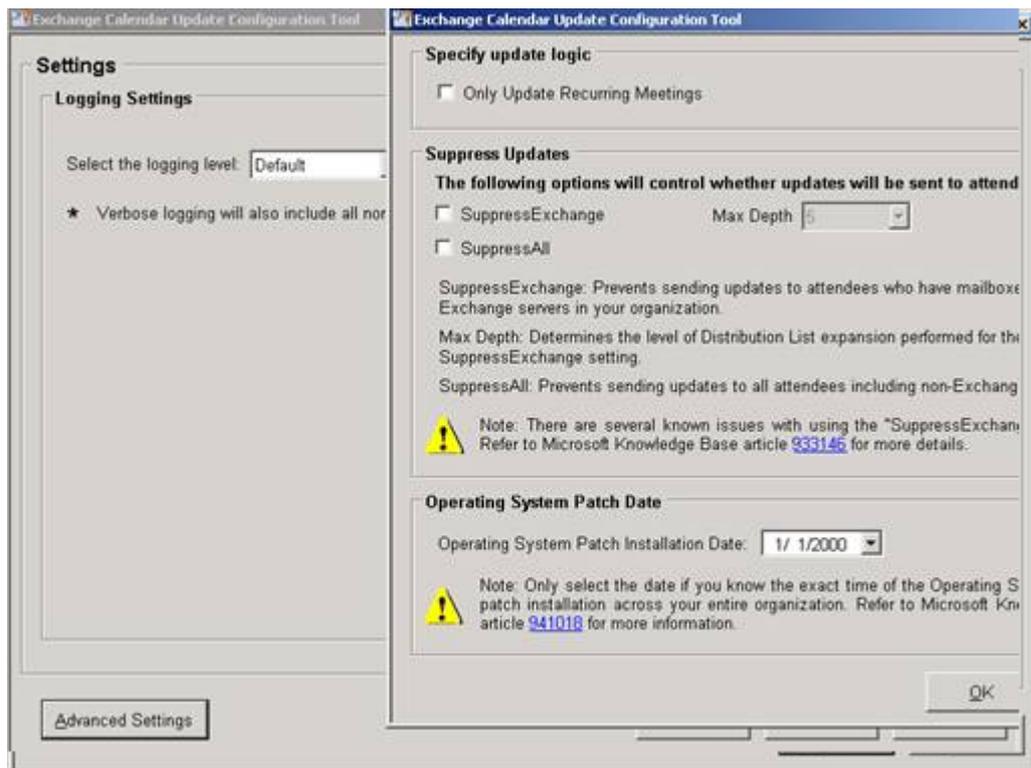
c. The tool will then commence the time zone extraction process:

    i. All Exchange servers in your organisation will be listed, and you may select as many or few Exchange servers you wish to process at this time then Click Next
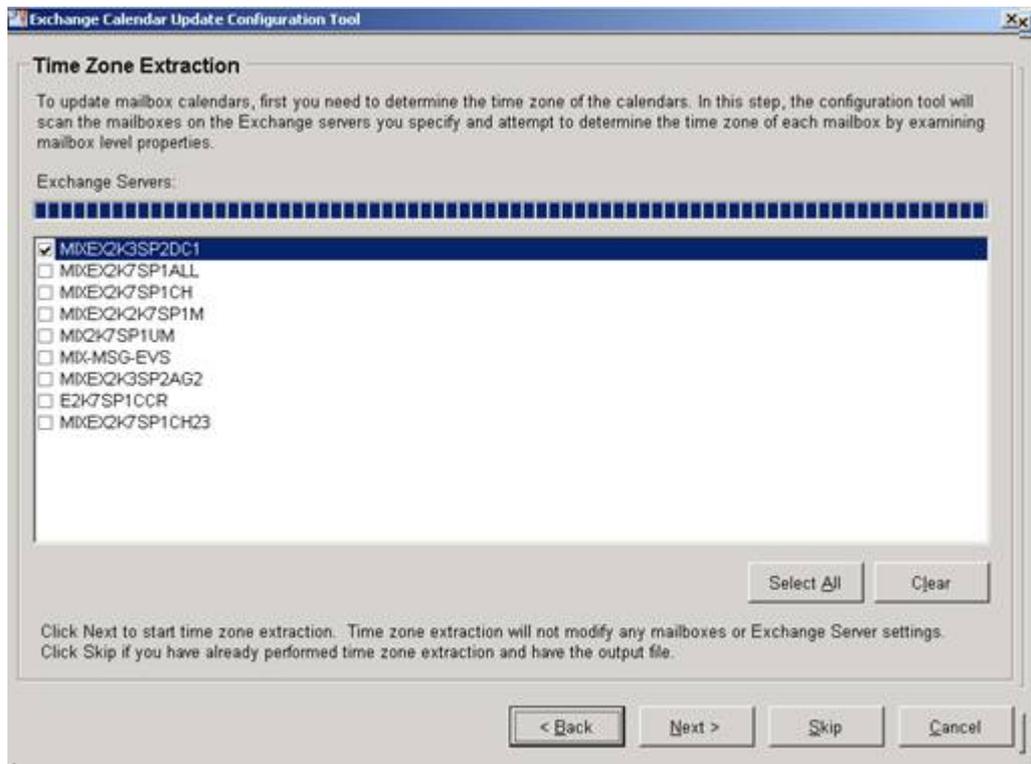
The tool will then logon all the mailboxes in the selected Exchange server(s) to detect the time zone information for each user, and then categorise the users' time zone as: Resolved, UnResolved, Conflict and Unknown
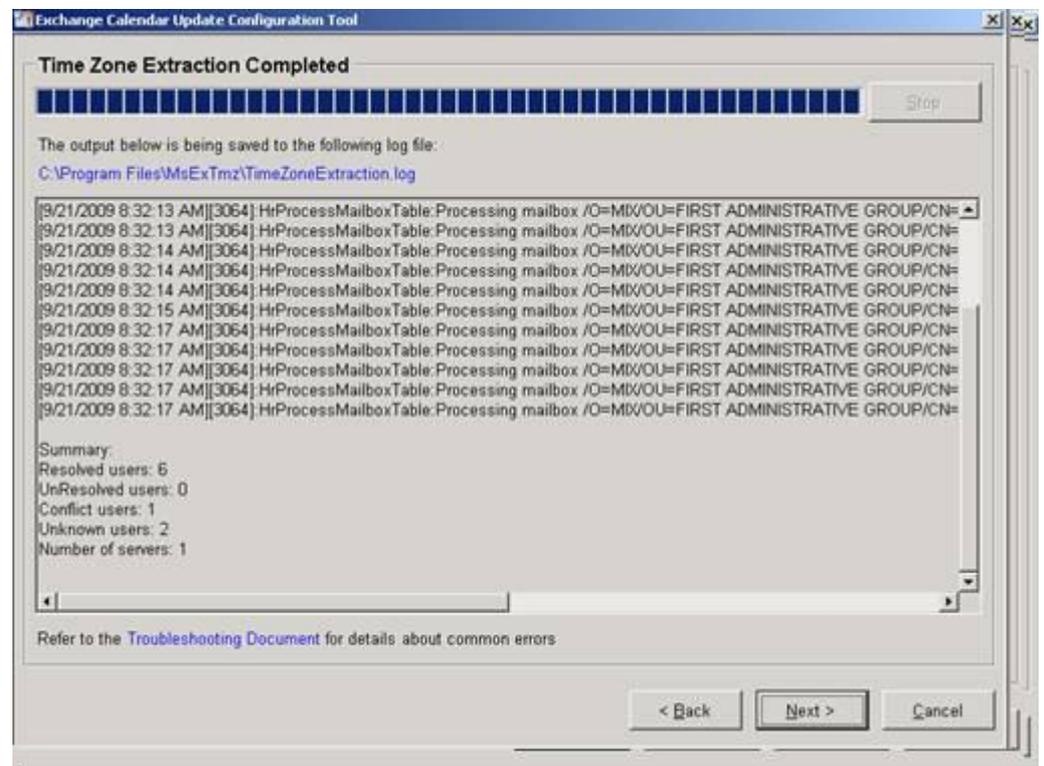
If there are users detected as an Unknown user, you should enter an appropriate value for the "Maximum number of calendar items per mailbox" to scan, as the tool will scan these additional calendar items to determine the time zone info.

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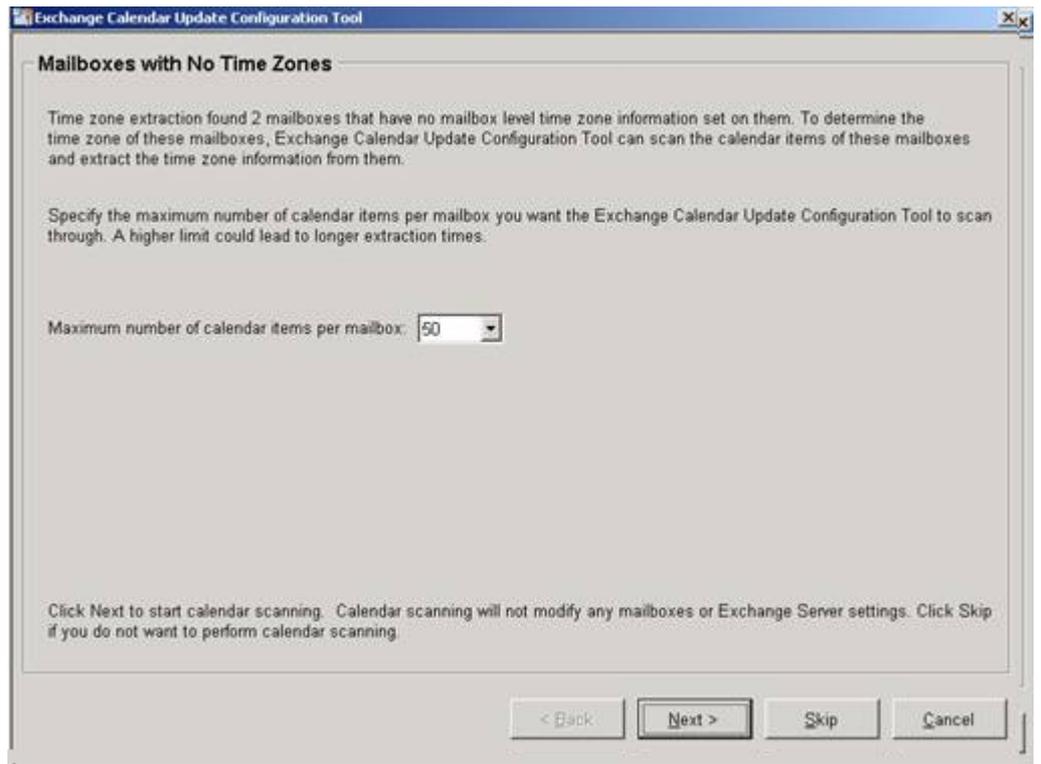
After scan finishes successfully, it will list the result of the additional scan.
Click Next.
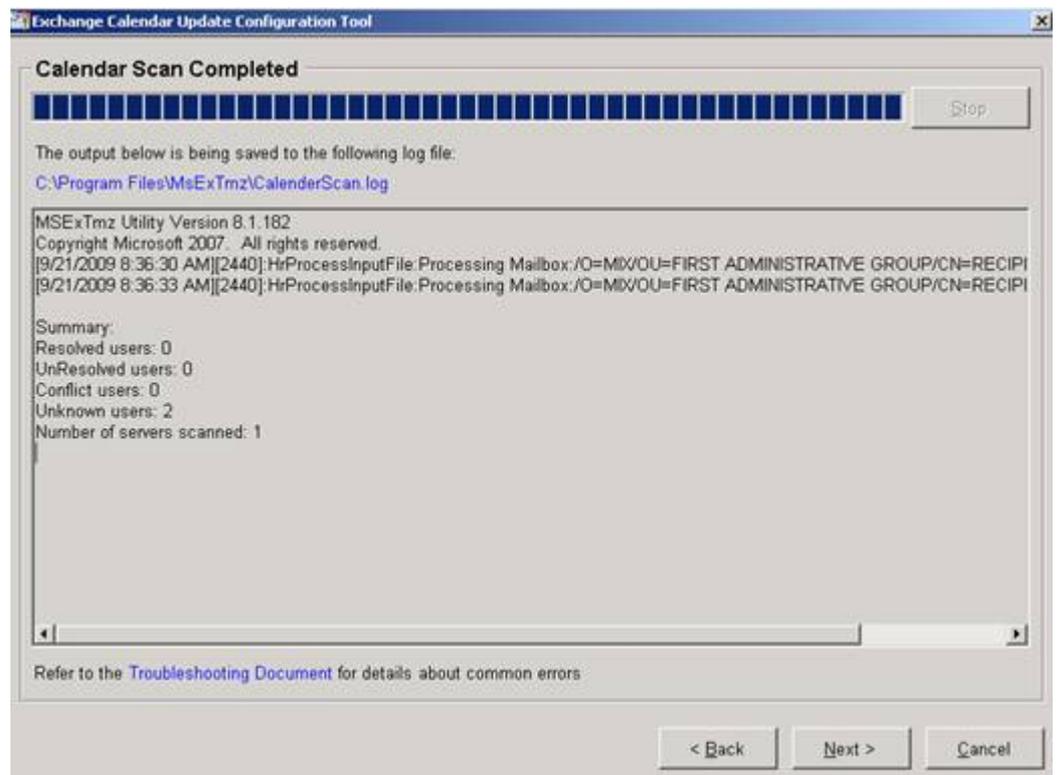
Where the tool detected users with multiple time zones, you will be
prompted to specify a time zone. Click Next.
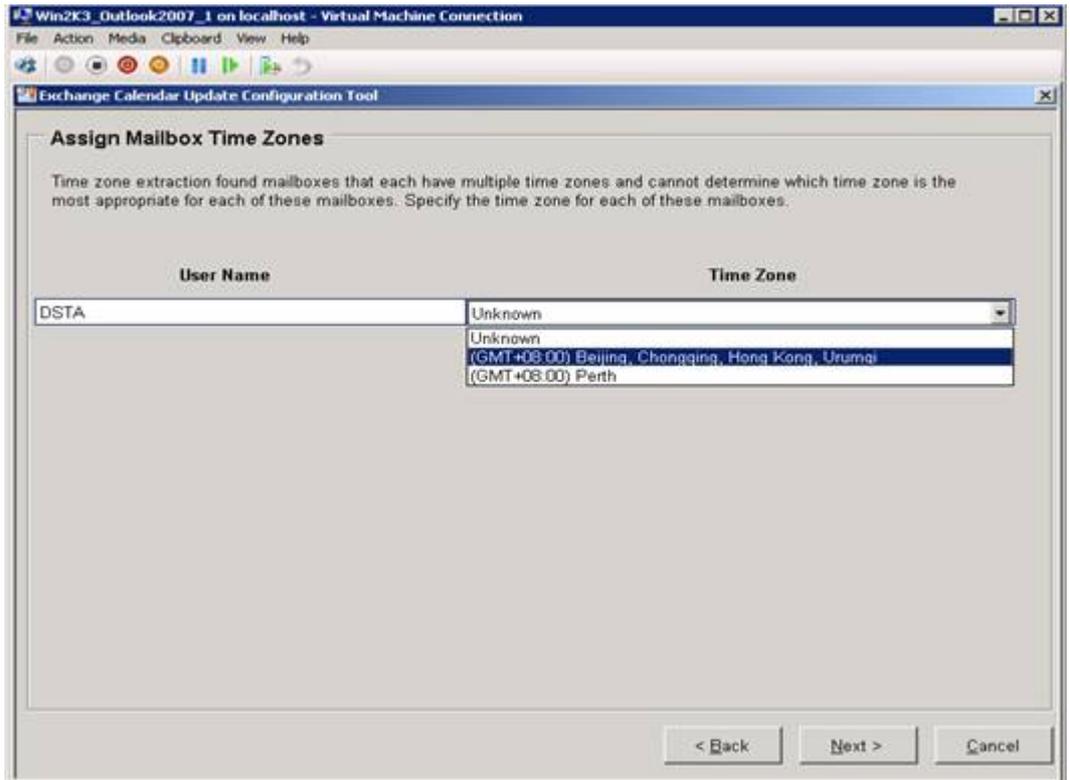
5. For resource mailboxes, you can add them to prevent the potential conflict. Enter any resource mailboxes, and click resolve. Once complete, click Next.

6. Select the time zones that need to be updated. For the 2009 Western Australia update, select the (GMT +8) Perth time zone, and click Next
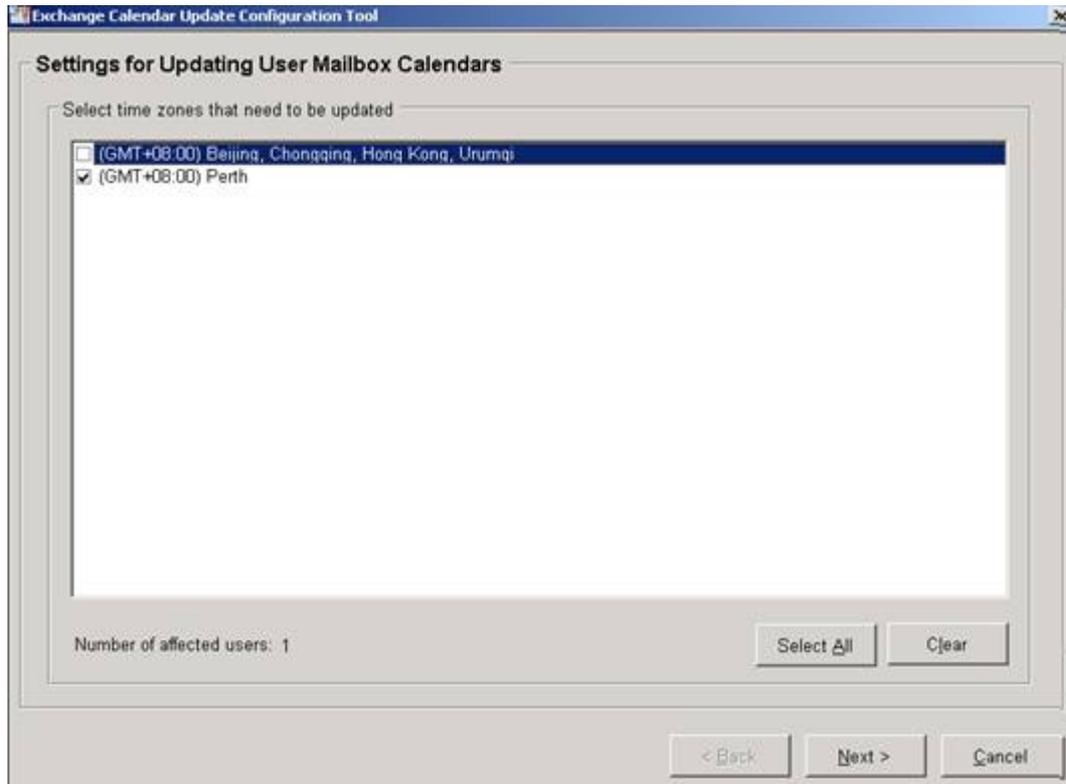
7. The tool will then perform the calendar rebasing by logging on to all mailboxes in the selected time zone then update all the calendar items.

8. If you receive an error as highlighted below, this indicates that you've hit a known issue of the Exchange rebasing tool. See section 5.5.1 for suggested options.

Western Australia 2009 Daylight Saving Planning Guide Western Australia 2009 Daylight Saving Planning Guide
"WA_DaylightSavingPlanningGuide_September 2009.doc" last modified on 29 Sep. 09

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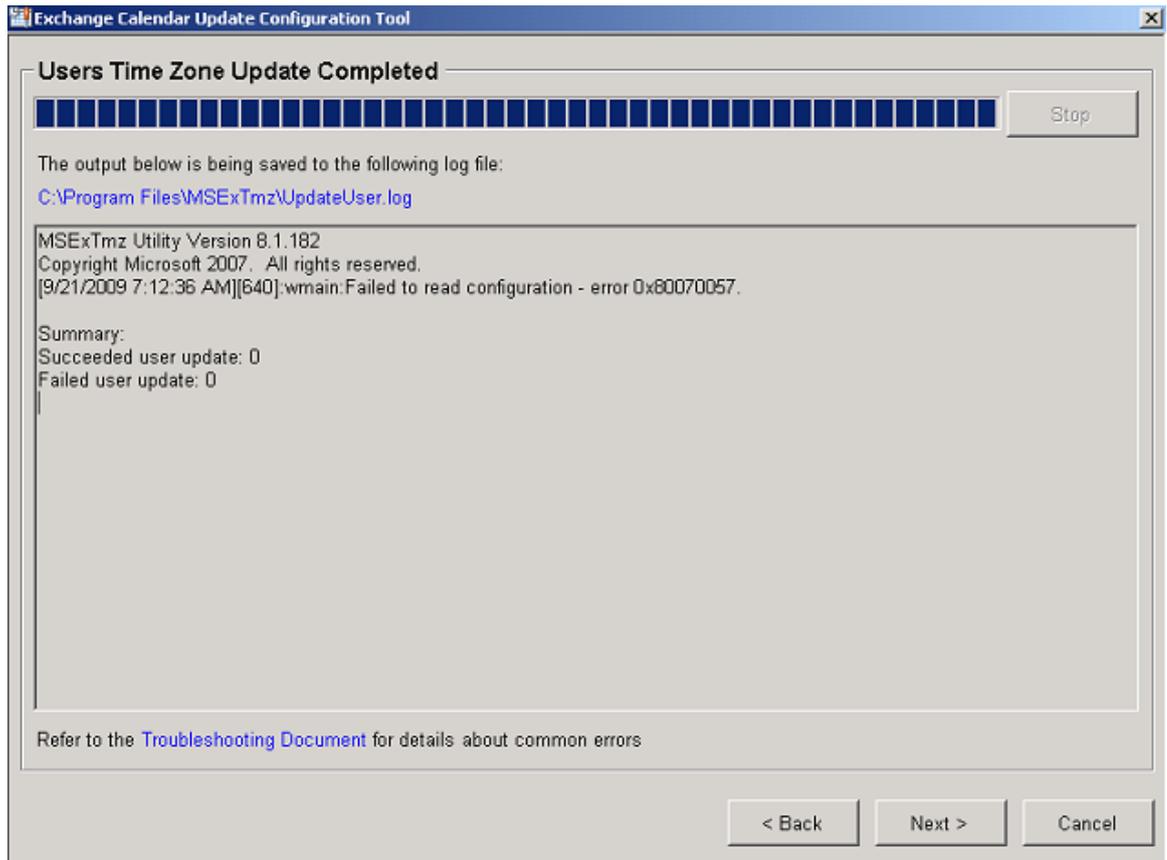
5.4.1.2 Using the Time Zone Data Update Tool for Microsoft Office Outlook

Before using the Time Zone Data Update Tool for Microsoft Office Outlook, it is suggested that you disable the "Automatically decline conflicting meeting requests" option on resource mailboxes within your environment. This will ensure that rebasing activities that involve such resources do not get automatically declined. It is not possible to control which user will send updates to resource mailboxes first, so disable this setting to avoid the updates being declined by the resource mailbox. This setting should be re-enabled as quickly as possible to avoid meeting requests created after the rebasing activity not processing resource mailbox conflicts correctly.

The steps below identify an automated method to use the TZ Update tool; it is equally valid to perform this rebasing step manually.

1. Distribute the Outlook Update Tool to client computers of Western Australia via group policy or other software distribution methods as appropriate

   Note: this tool can be downloaded from the following link:
   http://www.microsoft.com/downloads/details.aspx?familyid=%20E343A233-B9C8-4652-9DD8-AE0F1AF62568&displaylang=en

2. Deploy a logon script for Western Australia users with the command:

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"C:\Program Files\Microsoft Office\Office12\Office Outlook Time Zone Data Update Tool\TZMOVE.exe" /quiet

3. Once the user logs on to their computer, the TZMove tool will execute and will process their mailbox and send any updates necessary to all attendees to update the schedule of the meeting requests.

5.5   Known issues with the Exchange and Outlook Rebasing tools

There are two known issues with the Microsoft Exchange and Outlook rebasing tools for daylight savings.

5.5.1   System Patch Date

The server re-basing tool provides for an option to restrict processing calendar entries based on the "**Operating System Patch"** date**.   The tool changes the format of dates supplied in the MM/DD/YYYY format to the M/DD/YYYY format. This causes an incorrect option setting in the Mailboxes.server.ini file.

 This generates an error message that resembles the following in the error log:

[28/02/2008 7:10:21 AM][776]:wmain:Failed to read configuration - error 0x80070057.

Our suggested workarounds around for this issue are:

- Use the Outlook Client Version of the tool when rebasing after a specific date is required.

Or

- Do not use the Operating System Patch Date option when using the server version of the tool.

5.5.2   Limitation on Number of Mailboxes that can be Rebased

During the rebasing process, some customers have reported observing a MAPI_E_NETWORK_ERROR. Our investigation has shown that this commonly occurs when running the rebasing tool from a workstation with a customised build such as a corporate SOE.

Our suggested workarounds around for this issue are:

- Install a generic Microsoft operating systems image (direct from the source files) and re-run the tool.

Or

- Use the rebasing tool virtual machine image.

Or

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Limit the number of mailboxes being processed in each batch by the tool to a number which does not generate the error. Depending on the custom SOE the number of mailboxes that may be processed varies and typically is in the range of 50 to 75 mailboxes.

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6 PREPARING WINDOWS SHAREPOINT SERVICES FOR DAYLIGHT SAVINGS IN WESTERN AUSTRALIA

This section provides guidance on preparing Windows SharePoint Services (WSS) for changes to Western Australia Daylight Savings in 2009.

The versions of Windows SharePoint Services that need to implement DST updates or solutions are:

- WSS v2.0, including Microsoft Office SharePoint Portal Server (SPS) 2003.
- WSS v3.0, including Microsoft Office SharePoint Server (MOSS) 2007.

WSS maintains time zone information independently of the host operating system in the text file TIMEZONE.XML. Traditionally, hotfixes were used to update TIMEZONE.XML. Currently we release WSS hotfixes for DST changes semi-annually. A hotfix may not always become available before a DST transition happens. When hotfixes are not available, TIMEZONE.XML can be manually updated as a workaround.

To prepare WSS for a daylight savings change, the following steps need to be performed:

1. Apply the appropriate time zone update(s) to the host Windows Server operating system.
2. Apply the latest hotfix or service pack to WSS to rectify known daylight savings issues and obtain the most recent version of TIMEZONE.XML.
3. Manually update the TIMEZONE.XML file to reflect the changes in daylight savings time.
4. Use the SharePoint tzmove operation of stsadm to adjust any time-dependent data items that fall between the old and new daylight savings times.

Each step is described in detail in the following sections.

6.1 Apply Operating System Time Zone Update

Perform all actions in Section 4 of this document to remediate your Windows operating systems. Please follow the necessary steps on all servers where you have Windows SharePoint Services installed before you proceed with next step.

6.2 Apply WSS Hotfix or Service Pack

Microsoft always recommends you are running the latest Service Pack and the most recent Cumulative Update (CU). This will provide you with the most complete time zone configuration as a basis for subsequent updates to the TIMEZONE.XML file. It is not mandatory to be running the latest Service Pack and Cumulative Update prior to making the TIMEZONE.XML update, as the documented changes in section 6.5 will only modify the GMT+8 Perth time zone. The following table outlines the suggested minimum Cumulative Update you should implement that contain DST or time zone related changes.

Version	Hotfix or Service Pack	Comments
WSS 3.0 (MOSS 2007)	Service Pack 1	The February 2009 CU, KB961750, contains changes to the TIMEZONE.XML. Consider installing this CU as a minimum.
	Service Pack 2 (WSS 3.0) (MOSS 2007)	The April 2009 CU, KB, contains changes to the TIMEZONE.XML and a DST related fix. Consider installing this CU as a minimum.
WSS 2.0 (SPS 2003)	Service Pack 3	KB962955 contains several time zone updates. Consider installing this as a minimum.

6.3   Update TIMEZONE.XML

Detailed instructions for updating TIMEZONE.XML can be found at KB888253. Note that this article uses the NZ daylight savings extension as an example, and should not be implemented. Section 6.5 describes the required change to ensure the West Australia DST change is in effect.

Technically, update to TIMEZONE.XML is only required on web front-ends (servers take web application role) however we recommend that you update TIMEZONE.XML in all SharePoint servers within your environment to ensure you have a consistent copy of TIMEZONE.XML across the farm.

A restart of Internet Information Services (IIS) is required for the changes to take effects.

6.4   Use TZMOVE to Adjust Time-Dependent Data Items

Adjusting times within your SharePoint environment is an optional step which is not required in all scenarios. You should evaluate your need to run TZMOVE in your environment. We recommend that you read KB939770 (WSS v2), KB939809 (WSS v3) to understand the implication of this step prior to undertaking it. If you decide this step is necessary, we suggest that you backup your SharePoint content databases before you proceed.

Should this step be required, it is only necessary to do so once for the farm, and can be carried out from any web front-end within the farm.

Below are some sample scenarios for your references. These scenarios assume that you have applied the timezone.xml update as per Section 6.5:

Scenario 1:

You have SharePoint list columns that carry a Date and Time type value. Examples of such columns are Start Time/End Time of Calendar lists, Expiration of Announcements, or any custom column you

have created to carry a Date and Time value. You already have values in those columns that fall for example in November 2009. Those values were created before the DST update was applied to SharePoint, thus the values stored in the database and be incorrect. After updating SharePoint to contain latest time zone information for Perth and restarting IIS, those values may appear shifted by 1 hour from their original value when you look at it in your SharePoint site. Immediately after you update timezone.xml, perform the following command to adjust these values:

> *stsadm.exe -o tzmove -name perth2009 -update all*

Note that this example command assumes you have used the TIMEZONE.XML update described in Section 6.5.

Scenario 2:

You have SharePoint list columns that carry a Date and Time value. You updated timezone.xml, for example on 14th September 2009 (represented in YYYYMMDD format as 20090914) however you did not run TZMOVE command at that time. When you go to perform the TZMOVE, Date and Time values have been added or modified. In order to only update those Date and Time items created before the update to TIMEZONE.XML, you need to specify the date the TIMEZONE.XML update was performed, by using a command such as:

> *stsadm.exe -o tzmove -name perth2009 -update before -date 20090914*

Scenario 3:

You have SharePoint list columns that carry a Date and Time value, however none of those values occur after 25th October 2009. In this scenario, there is no need to run STSADM with TZMOVE command to adjust Date and Time values.

6.5   Required TIMEZONE.XML Changes

Below is a sample of the existing timezone.xml file describing the GMT+8 Perth time zone, as well as the updated information that is required in section 6.3. The existing information assumes you have the June Cumulative Update for SharePoint, KB971538 – if not, the changes are the same.

In the TIMEZONE.XML, two <History> nodes are created as the DST rules in effect in 2008 and 2009 are not the same – by having two <History> nodes, it fully describes the DST transition periods for both years. SharePoint relies on the <History> node to calculate the correct date time value to store in the database, and also to display those values correctly in your SharePoint sites.

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NOTE: The TIMEZONE.XML file will be overwritten when you install future WSS updates which include an update to this file. In most instances this is expected, as a subsequent update will correctly set the GMT+8 Perth time zone, but caution should be exercised when applying any SharePoint update or Service Pack in the meantime.

Original TIMEZONE.XML file contents for Perth Time Zone:

```xml
<TimeZone ID="73" Name="(GMT+08:00) Perth" Hidden="FALSE">
  <Bias>-480</Bias>
  <StandardTime>
    <Bias>0</Bias>
    <Date>
      <Month>3</Month>
      <Day>5</Day>
      <Hour>3</Hour>
    </Date>
  </StandardTime>
  <DaylightTime>
    <Bias>-60</Bias>
    <Date>
      <Month>10</Month>
      <Day>5</Day>
      <Hour>2</Hour>
    </Date>
  </DaylightTime>
  <History Year="2005">
    <Bias>-480</Bias>
    <DaylightTime>
      <Bias>-60</Bias>
    </DaylightTime>
  </History>
</TimeZone>
```

Updated TIMEZONE.XML file contents for Perth Time Zone:

```xml
<TimeZone ID="73" Name="(GMT+08:00) Perth" Hidden="FALSE">
  <Bias>-480</Bias>
  <DaylightTime>
    <Bias>-60</Bias>
  </DaylightTime>
  <History Year="2009" Name="perth2010">
    <Bias>-480</Bias>
    <StandardTime>
      <Bias>0</Bias>
      <Date>
        <Month>3</Month>
        <Day>5</Day>
        <Hour>3</Hour>
      </Date>
    </StandardTime>
    <DaylightTime>
      <Bias>-60</Bias>
      <Date>
        <Month>12</Month>
        <Day>5</Day>
        <Hour>23</Hour>
        <Minute>59</Minute>
```

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```xml
            <Second>59</Second>
            <Milliseconds>999</Milliseconds>
            <DayOfWeek>4</DayOfWeek>
          </Date>
        </DaylightTime>
      </History>
      <History Year="2008" Name="perth2009">
        <Bias>-480</Bias>
        <StandardTime>
          <Bias>0</Bias>
          <Date>
            <Month>3</Month>
            <Day>5</Day>
            <Hour>3</Hour>
          </Date>
        </StandardTime>
        <DaylightTime>
          <Bias>-60</Bias>
          <Date>
            <Month>10</Month>
            <Day>5</Day>
            <Hour>2</Hour>
          </Date>
        </DaylightTime>
      </History>
</TimeZone>
```

7 PREPARING WINDOWS MOBILE FOR DAYLIGHT SAVINGS IN WESTERN AUSTRALIA

This section provides guidance on preparing Windows Mobile devices for changes to Western Australia Daylight Savings in 2009.

The versions of Windows Mobile that need to implement DST updates or solutions are:

- Windows Mobile 5.0 Pocket PC
- Windows Mobile 5.0 Smartphone
- Windows Mobile 6.x Professional
- Windows Mobile 6.x Standard

7.1 Technical Overview

There are two updates available for Windows Mobile devices:

- WindowsMobile-KB975353.msi
- WindowsMobile-KB975353.cab

WindowsMobile-KB975353.msi is a desktop tool while WindowsMobile-KB975353.cab is a standalone file that can be installed directly onto Windows Mobile devices.

These updates will be available from KB975353 of via direct download as follows:

WindowsMobile-KB975353.msi - http://download.microsoft.com/download/6/8/9/6892CA30-45CD-40D5-8E14-3A0755A07D00/WindowsMobile-KB975353.msi

WindowsMobile-KB975353.cab - http://download.microsoft.com/download/6/8/9/6892CA30-45CD-40D5-8E14-3A0755A07D00/WindowsMobile-KB975353.CAB

7.2 Applying the Cumulative Time Zone Update

There are 2 ways to apply the time zone update, either by connecting the Windows Mobile device to a Windows computer, or directly on the Windows Mobile device.

7.2.1 Windows Computer based installation

To install WindowsMobile-KB975353.msi from a Windows PC that has ActiveSync or Windows Mobile Device Center (WMDC) installed:

1. Connect the Windows Mobile device to the Windows PC. This will initiate the ActiveSync connection.

2. Install WindowsMobile-KB975353.msi on the Windows PC.

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3. ActiveSync will push the update from the Windows PC to the Windows Mobile device and install the update on the device.

NOTE: Please make sure that the Windows Mobile device is connected correctly before you install the MSI update. The MSI update will only be pushed down to the device if the device is connected when the MSI is executed.

7.2.2   Windows Mobile Device based Installation

To install WindowsMobile-KB975353.cab directly on a Windows Mobile device:

1. Copy WindowsMobile-KB975353.cab to the Windows Mobile device. This can be done through several methods, including copying to a memory card, send as an attachment in an email, a URL to an internet or external website hosting the file, or via file synchronisation while directly connected to a PC.

2. In File Explorer application, click the cab file to install.

The cab file can be installed on the following Windows Mobile devices:

- Windows Mobile 5.0 Pocket PC
- Windows Mobile 5.0 Smartphone
- Windows Mobile 6.x Professional
- Windows Mobile 6.x Standard

NOTE: As Windows Mobile 5.0 Smartphone devices don't have the File Explorer application, the recommendation for these devices is to install WindowsMobile-KB975353.msi via a Windows PC.

APPENDIX A – DETAILED DISCUSSION OF THE IMPACT OF THE DST CHANGES

DST changes can have a significant impact on business performance if not dealt with proactively. These effects can range from the mildly annoying incorrect time display on the clock, to significant user impacting calendaring problems, to financial and reputation loss if business critical services fail. And of course there is the additional workload that IT organisations face with the implementation of these changes and mitigation strategies.

The crucial times that organisations need to be concerned about are those "extended DST" or "delta" periods where the new DST rules differ from the previous DST rules. Whilst not exhaustive, the rest of this section explores some of the impacts. Organisations should assess the impacts for their own environments, specifically with services that are time dependent.

Most IT systems are affected – including Microsoft Windows operating systems, Microsoft Office Outlook, other Microsoft products, as well as third party and custom applications. These effects can be loosely categorised into three main categories, namely Operating Systems, Scheduling and Calendaring and Time Dependent Applications.

For Operating Systems:

- For machines which have not been updated for the new DST rules, time stamps on files will be off during the delta period.

    o *For example - Windows Explorer (NTFS) Date Created File Stamp will be off by one hour.*

    NOTE: In addition, Windows clients in each time zone need to be updated "en masse" or as a group to ensure correct time baseline is used by shared resource applications (for example Microsoft Outlook). An inconsistent baseline would cause confusion when updating/viewing recurring meetings or appointments.

For Scheduling and Calendaring:

- The immediate and obvious impact will be on appointment times and resources – meetings falling in the delta periods will be off by an hour.

- Applications reading time from the system time will be presented this incorrect time. For example:

    o *Local computer Automated Scheduling will be off by one hour.*

    o *Outlook created/updated calendaring items will be off by one hour.*

- o *Exchange calendaring items updated/created using Collaboration Data Objects (CDO), which is used by Outlook Web Access (OWA) and various third party vendors such as RIM/BlackBerry will be off by one hour.*

- o *Exchange message auditing and retention rules will be off by one hour.*

- o *Conflicts can be created on shared calendars since meetings will be shifted to different times by different organizers.*

- The potential exposure can be higher if the changes can affect key systems like:

  - o *Travel Booking Systems*

  - o *Health Systems (Patient Management Systems that define dispensing of drugs)*

  - o *Scheduling Applications*

  - o *Backups (Batch jobs set to run at midnight will now execute an hour early or later)*

NOTE: There are two high-level steps to updating Outlook calendars for DST – updating the underlying operating systems and then fixing existing appointments that fall within the delta period.

For Time-Dependant applications:

- Accurate transactional time tracking e.g.: Systems that rely on transaction logging for audit purposes e.g.:

  - o *ATMs*

  - o *Time-based billing systems*

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Coordinated Universal Time (UTC) is a high-precision atomic time standard. Time zones around the world are expressed as positive or negative offsets from UTC. Local time is UTC plus the time zone offset for that location, plus an offset (typically +1) for daylight saving time, if in effect. UTC replaced Greenwich Mean Time as the basis for the main reference time scale or civil time in various regions.

Timestamps are values that specify a date and time combination. Applications that must handle timestamps typically store those timestamps in Universal Coordinated Time (UTC). The advantage of UTC is that UTC is universal. UTC is not subject to local time zones or to DST. However, UTC is neither user-friendly nor relevant to most users. Although UTC is the obvious choice for storage, it is not a good choice for display. Therefore, most applications convert UTC time to local time before they display the timestamp to the user. For example, Windows Explorer applies the time zone and the DST setting to the UTC timestamp before it displays dates and times for files in a Windows NT File System (NTFS) directory.

Conversion from UTC time to local time can be thought of as applying two offsets. The first is the time zone offset, and the second is the DST offset. Therefore, local time is effectively UTC time plus a time zone offset, plus any applicable DST offset. The time zone offset is fairly straightforward. The computer is configured for a particular time zone, and that time zone has an offset from UTC. To determine whether a DST offset should be applied is much more complex. This activity relies on many rules that are complex and dynamic.

Calendaring applications, like Microsoft Outlook, use UTC to record the times, and apply these two offsets (time zone and DST) when displaying the appointments. Refer to KB195900 (http://support.microsoft.com/kb/195900/en-us) for more details.

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APPENDIX B - PRODUCT SPECIFIC DST INFORMATION FOR WESTERN AUSTRALIA 2009

The status of available product updates appears in the table below. Notes regarding specific updates appear below the table.

Some of the updates are not specific to the Western Australia changes and can be applied immediately. Other products (for example SharePoint) require manual adjustment after application of the time zone update to the host Windows operating system.

> NOTE: Information in this table is correct as of 23rd September 2009. Please refer to the website (http://technet.microsoft.com/en-au/bb821275.aspx) for the most current information before deploying your updates.
>
> If you are using a hard copy of this guide, please follow the URL above to get access to the download links referred to in the table.

Product	Version	Status	Reference
Windows	XP, Server 2003, Vista, Server 2008, Windows 7, Server 2008 R2	Available	KB974176
	2000 Professional and Server Refer to Section 4.2 and KB914387 for manual update instructions or discuss with your TAM options for EHSA.		
Windows Mobile	6.0, 5.0, Desktop Tool	Available	KB975393
Exchange	Server 2007	No Exchange specific update necessary	
	Server 2003	Install CDO update No WA DST Exchange specific update necessary	KB924335
SharePoint	WSS V3 / MOSS 2007	Manual	Instructions

	WSS V2 / SPS 2003	Process	
Dynamics CRM	4.0	Released in next rollup package.	Contact Product Support
	3.0	Available	KB975628

Adjusting Office Outlook Calendars

Microsoft Office Outlook uses time zone information maintained by the Windows operating system to calculate start times for future appointments when they are created or updated. When a time zone update is applied to Windows, existing appointments in extended daylight saving periods may be shifted by one hour. Refer to KB931667 for information, procedures and tools for adjusting Outlook and Exchange calendar items after a change in daylight saving times.

Microsoft Dynamics CRM v3.0

The Microsoft Dynamics CRM 3.0 client for Microsoft Office Outlook uses the CDO interface to interface with Microsoft Outlook. To ensure correct operation, apply the corresponding time zone updates to Microsoft Outlook and Microsoft Exchange Server after updating all host operating systems.

After applying a time zone update, appointments which fall within the new daylight saving period may be shifted by one hour. To fix this problem, either update the appointments manually and re-save them or adjust Outlook Office calendars according to the instructions above after applying the updates to the host operating system, the Outlook client and the Microsoft Exchange Server.

Windows CE and Mobile Devices

Device owners should contact the device manufacturer to determine whether or not an update is available.

Microsoft Java Virtual Machine

- The Microsoft Java Virtual Machine (MS JVM) will sometimes apply an incorrect time zone rule after the daylight saving update is applied and the daylight saving transition has occurred. Microsoft is restricted to providing only security fixes to the MS JVM. Further information about the MS JVM is available at http://www.microsoft.com/mscorp/java/default.asp

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APPENDIX C - BUILDING YOUR DST UPDATE RESPONSE PLAN

Process Overview

The Microsoft-recommended update-management process is a four-phase approach to managing patches or updates. Built on the best-practice Microsoft Operations Framework and IT Infrastructure Library frameworks, it is designed to give your organisation control over the deployment and maintenance of interim software releases into your production environment. These four phases are illustrated in the following diagram:
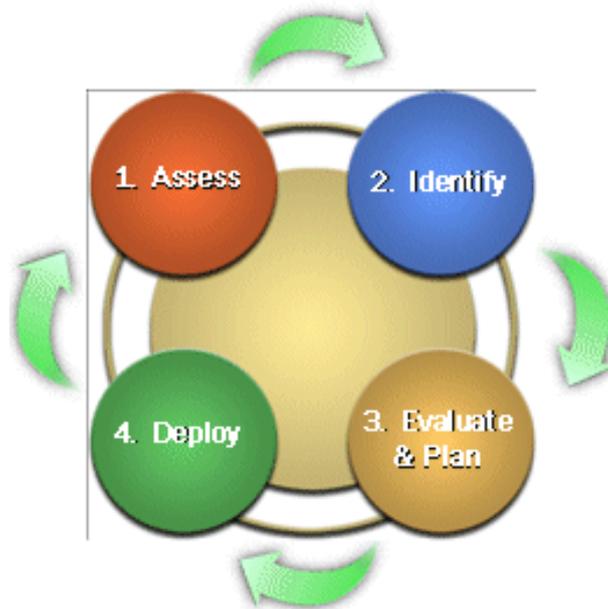
Assess

In the Assess phase of the high-level model, you determine what you have in your production environment, what risks and vulnerabilities you might face, and whether your organisation is prepared to respond to a new software update.

This phase incorporates the initial setup activities of:

- Baselining - the process by which you identify what versions of software you want to manage

- Subscription - how you work out the best sources of information about new software updates for the versions of software you've decided to manage.

Identify

In the Identify phase, once your organisation becomes aware of a new software update, you determine whether the update is relevant to computers within your production environment, and if

it is relevant, you submit a change request to gain approval for deploying the update into production.

This phase incorporates the following activities of:

- Identification- how organisations are notified of new software updates, how they screen them, and how they validate them.

- Relevance - how organisations determine whether they have the operating systems or applications that need to be updated, and, if they do, whether they have the risks in question.

- Quarantine - the process by which organisations look at any software updates in isolation to prevent virus infection or malicious code affecting their IT infrastructures.

- Change request - a formal request to make the changes required to deploy the software updates.

Evaluate and Plan

By the end of the Evaluate and Plan phase, you should have made a go/no go decision to deploy a software update and have determined the necessary tasks that will be needed to deploy it into production. You should also have tested it in a production-like environment to confirm that it does not compromise business critical systems and applications.

This phase incorporates the following activities:

- Change classification - assigning of a priority and a category to a proposed change, using its urgency and its impact on the infrastructure or users as criteria.

- Change authorization - consideration and approval or disapproval of a proposed change by the change manager and the Change Advisory Board (CAB).

- Change development - the planning and development of a change, a process that can vary immensely in scope and includes reviews at key interim milestones.

- Plan release - the process whereby the release manager determines what needs to be done to the production environment to implement a change.

- Release development - the phase during which members of the release team develop the processes, tools, and technologies required to deploy the release into the production environment.

- Acceptance testing - the process for ensuring that releases will not adversely impact the production environment. Each release should be tested in a facility that effectively models the conditions existing in the production environment.

- Rollout planning - the stage at which the release manager reviews the rollout order to determine whether it is still aligned with business requirements and priorities.

Deploy

The goal for the Deploy phase is to successfully roll out the approved software updates into your production environment so that you meet all of the requirements of any deployment service level agreements (SLAs) you have in place.

This phase incorporates the following activities:

- Rollout preparation - getting the production environment ready for each new release, which generally includes communicating information about the release to users and other personnel, training service desk and technical support staff, and making backups of critical IT components.

- Release deployment - the process of moving the release into the production environment.

- Change review - the process of determining the effectiveness of the change.

Configuration management, which spans all phases of this model, is a critical process responsible for identifying, controlling, and tracking all versions of hardware, software, documentation, processes, procedures, and all other inanimate components of the information technology (IT) organisation.

Microsoft has developed and published prescriptive guidance on software updates and patch management, both at a process and at a technical level. These solution accelerators are available from the Management and Operations website at http://www.microsoft.com/technet/solutionaccelerators/cits/mo/default.mspx.

Applying this process to DST change updates

The biggest differences between making DST rule changes as compared to normal Hotfix updates are related to the rebasing of scheduling and calendaring applications and the update order for making these changes successfully; summarised as:

- the complexity of these changes

- the impact these changes have, and

- the impact of not making these changes has on the business

There are many similarities and common elements between security updates and DST updates:

- common deployment technologies

- the importance of understanding what systems and services are used in the production environment, and

- the necessity of following a disciplined change management process

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APPENDIX D – DST UPDATE RESPONSE PLAN CONSIDERATIONS

The following four tables of considerations are intended to help organisations understand the problem space better:

- what are the important questions that IT organisations have to answer as they develop their DST update plans,

- what resources and artefacts would be useful, and

- what lessons and recommended practices should they consider

It is not an exhaustive compilation, and certainly not all topics will be relevant for all situations – hopefully it will stimulate the thinking and enable IT organisations to make better informed choices.

Assess

Phase	Considerations
Assumptions	The organisation is assessing the need to update their IT systems to reflect the Western Australian 2009 DST changes
Assess	**Description:** In this phase of the high-level model you determine what you have in your production environment, what risks and vulnerabilities you might face, and whether your organisation is prepared to respond to a new software update.
	Key questions: What software products do we have in our environment? Do we know the exact versions, service pack levels, and patch levels? How many installations of each of these, and where are these systems located? What mechanisms does the company have in place for patch management? What mechanisms does the company have in place for software distribution? Who are the business owners and the technical contacts for these systems? Do we have service level expectations for these systems? What business and IT services does the company's IT department provide? (Does it have a service catalogue?) What operating system is the client computer running? What is the Client Office configuration? How many mailboxes does the company have? How many servers does the company have? What is the geographical distribution of the company's servers? How many users does the company have?
	Inputs:

	Systems management inventory reports
	Service catalogues
	Service maps
	Configuration management database
	Service level agreements
	Outputs: Software installation register
	Best practices: Automated collection and reporting is about the only way something like this can work on an ongoing basis. Periodic audits give the organisation a sense of confidence that their tools and processes used to collect and record this information are working correctly – the information can be trusted. Limit access to this information only to those roles that need it. Different roles need differing information – consider an automated, role-based report generation.
Useful References	

Identify

Phase	Considerations
Assumptions	The organisation has an accurate inventory of their IT systems and services The organisation is evaluating the impact of a DST change to their environment
Identify	**Description:** The Identify phase is concerned with evaluating whether a new software update is relevant to computers within your production environment, and if it is relevant, the process recommends a change request to gain approval for deploying the update into production.
	Key questions: What software update is available or required? Does the company conduct business or schedule meetings outside the affected Australian states? Does the company support its own Microsoft Exchange environment? What is the Exchange Platform? Is the company's Exchange server hosted centrally or locally? Does the company use Exchange Server public folder calendar items? Does the company use the Direct Booking feature for conference rooms in Microsoft Office Outlook? Does the company use Office Outlook Web Access? Does the company support mobile devices? Are there any other systems or software products which use the affected components like CDO?

	Inputs: Software installation report Technical information about the update Vendor supplied information about the updates (guides, scripts, etc) IT architecture and operational documentation Service Catalogues Service Level Agreements
	Outputs: Approved request for change DST Update Assessment report High-level technical approach and recommendations Enterprise response plan including: • Initial project plan • Communication plan
	Best practices: DST updates may be released periodically. Ensure that the latest updates are identified and selected for testing. DST updates usually require that the underlying Operating Systems and installed applications are at the latest supported service pack level. As part of preparing for the deployment of DST updates, a company may need to apply service packs and Hotfix rollups.
Useful References	

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Evaluate and Plan

Phase	Considerations
Assumptions	The organisation has identified the need to make DST change updates to their IT systems
Evaluate and Plan	**Description:** By the end of the Evaluate and Plan phase, you should have made a go/no go decision to deploy a software update and have determined the necessary tasks that will be needed to deploy it into production. You should also have tested it in a production-like environment to confirm that it does not compromise business critical systems and applications.
	Key questions: Which Line of Business (LOB) applications does the company consider to be mission critical? Is the company's infrastructure supported through standard maintenance windows? How the company's test environment is structured (for pretesting and release phases)—for example, can the company test DST updates first to a small user or pilot group? How many times does the company want to touch its clients and employees? What DST updates can the company's clients and employees be responsible for (for example, does the company use Microsoft Systems Management Server [SMS] or does the company direct clients and employees to a Web site to download the DST update)? How is the company managing conference rooms and conference room auto-response e-mail messages? Does the company have any kiosk-style multiuser computers? Which updates and changes do we need to apply to which systems? Is there any recommended guidance on the installation sequence? What mitigation strategies can we put in place to minimise the effects of these changes? Do we have the necessary skills and resources to successfully make these changes? Are there any projects or deployments currently underway that will also need to receive these changes? Who are the key business stakeholders? Do we have a recommended communications plan? Are we able to manually make these changes and updates for those products which do not have hotfixes or which are outside of mainstream or extended support lifecycle? Have we communicated these changes to the helpdesk and do they have the sufficient training and understanding to provide the users with support for these changes? Did the pilot and/or lab tests go according to plan? What do we need to change in our plan to avoid the problems in pilot?

	Inputs:
	Approved request for change
	DST Update Assessment report
	High-level technical approach and recommendations
	Outputs:
	Updated communication plan
	Deployment plan with scripts, tools, instructions
	Updated project plan
	Updated DST response plan
	Best practices:
	Lab and Pilot testing allows you to identify unforeseen problems in a simulated production environment. It should be used to refine the deployment plan, develop deployment guidance and instructions, and also allow you to test a back out plan.
Useful References	

Deploy

Phase	Considerations
Assumptions	The organisation has a working and tested DST update plan
Deploy	**Description:**
	The goal for the Deploy phase is to successfully roll out the approved software updates into your production environment so that you meet all of the requirements of any deployment service level agreements (SLAs) you have in place.
	Key questions:
	Have the changes, dates, actions, expectations been communicated to the users?
	Do we have sufficient staff and resources to deploy the changes within the agreed timeframe?
	Can we implement any milestones to track our progress and success?
	Can our vendors or suppliers assist with an accelerated escalation path if we run into trouble?
	Have we completed the necessary changes, have they been tested, and do the changes meet the expectations?
	Do we have any loose ends to tidy up?
	What lessons have we learned from this deployment that we can reuse in any future deployments?
	Inputs:
	Deployment plan
	Emergency escalation procedures
	Milestones with times and expectations

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	Outputs: Completed Change Request Post Implementation Review Remediation tasks and recommendations Updated inventory report (configuration management database) Updated communications plan
	Best practices: Defined milestones allow the team to monitor ongoing progress and allow early detection of any deviations from the expected plan.
Useful References	

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APPENDIX E - SAMPLE ASSESSMENT WORKSHEETS

Example Microsoft Environmental Assessment

The table below is from the Microsoft IT DST Assessment project of 2008 and illustrates how Microsoft IT used the checklist to perform an initial review of its own environment.

Environmental impact assessment	Identify the business Service and IT Services that MSIT provides	Assessed end-to-end services impact and customer experience, including technology and processes	
Microsoft client environment	Operating system/number of users	Windows Vista (2007 Microsoft Office system)	95,000
		Windows XP SP2 (with Microsoft Office 2003)	60,000
		Windows XP SP2 (with the 2007 Office system)	32,000
		Microsoft Windows Server 2003 SP1	15,000
		Windows Mobile	47,000
	Mailboxes	130,000 mailboxes	
	Multiuser computers	Not affected	
Microsoft server environment	Number of servers	More than 200 Exchange servers with approximately 2,400 users per server	
	Exchange support	Yes	
	Exchange hosting configuration	Centrally hosted, multiple locations	
	Outlook Web Access	Yes	
Microsoft business environment	Conducts business or schedules meetings outside the United States and Canada	Yes, global company with international subsidiaries	
	Management of conference rooms and conference room auto-response e-mail messages	Uses Exchange Auto Accept Agent	
	Direct booking in Outlook	Yes	
	Public Folder with calendaring	Yes	
	Identified LOB applications and flagged them as mission critical as necessary	More than 350 LOB applications identified. Conducted mission-critical list mandatory test pass.	

	Infrastructure support configuration	Standard maintenance windows
	Patch management mechanism	Uses SMS for distribution
IT infrastructure	Software distribution mechanism	Uses SMS for distribution
	Test environment	Multiple labs and test environments
	Client and employee contact	Minimal; Microsoft is a technology company. Microsoft assumes that its employees understand the Windows Add/Remove Programs Tool functionality.

Microsoft Product Register

The following table is provided as a tool for IT Professionals to quickly record the relevant information about their environment. This table is derived from the Daylight Saving Time Update Guide located at http://support.microsoft.com/gp/cp_dst. The online guide provides an easy method to evaluate whether a particular product requires a DST update and then provides a list of KB articles and updates for the selected products.

PRODUCT	SP LEVEL	DST UPDATE REQUIRED?	TOTAL IN PRODUCTION	LOCATIONS	TECHNICAL CONTACT	BUSINESS CONTACT	SLA IN PLACE?	BUSINESS SERVICE	PRIORITY
Operating Systems									
Microsoft Windows 7									
Windows 7, 32-bit version									
Windows 7, 64-bit version									
Microsoft Windows Vista									
Windows Vista, 32-bit version									
Windows Vista, 64-bit version									
Microsoft Windows Server 2008									
Enterprise Edition (32-bit x86)									
Enterprise x64 Edition									
Enterprise Edition for Itanium-based Systems									
R2 Enterprise Edition (32-bit x86)									
R2 Enterprise x64 Edition									

Standard Edition (32-bit x86)									
Standard x64 Edition									
R2 Standard Edition (32-bit x86)									
R2 Standard x64 Edition									
Datacenter x64 Edition									
Datacenter Edition for Itanium-Based Systems									
R2 Datacenter Edition (32-bit x86)									
R2 Datacenter x64 Edition									
Microsoft Windows Server 2003									
Enterprise Edition (32-bit x86)									
Enterprise x64 Edition									
Enterprise Edition for Itanium-based Systems									
R2 Enterprise Edition (32-bit x86)									
R2 Enterprise x64 Edition									
Standard Edition (32-bit x86)									
Standard x64 Edition									
R2 Standard Edition (32-bit x86)									
R2 Standard x64 Edition									
Datacenter x64 Edition									
Datacenter Edition for Itanium-Based Systems									
R2 Datacenter Edition (32-bit x86)									
R2 Datacenter x64 Edition									
Microsoft Windows XP									
Media Center Edition 2005 with SP 2									
Media Center Edition 2004 with SP 2									
Media Center Edition 2002 with SP 2									
Home Edition with SP 2									
Home Edition									
Professional with SP 2									
Professional x64 Edition with SP 2									
Professional									
Microsoft Windows Small Business Server									
2003 Standard Edition									
2003 Premium Edition									
2003 R2 Standard Edition									
2003 R2 Premium Edition									
Microsoft Windows Embedded for Point of Service									
Windows Embedded for Point of Service									
Microsoft Windows Fundamentals for Legacy PCs									
Windows Fundamentals for Legacy PCs									
Microsoft Windows 2000									

Professional Edition with SP 4									
Server with SP 4									
Advanced Server with SP 4									
Applications									
Exchange Server									
2007, all versions									
2003 Enterprise Edition with SP 2									
2003 Standard Edition with SP 2									
2003 Enterprise Edition with SP 1									
2003 Standard Edition with SP 1									
2003 Enterprise Edition									
2003 Standard Edition									
2000 Server Enterprise Edition									
2000 Server Standard Edition									
Windows Mobile									
Windows Mobile									
Windows CE									
Windows CE 5.0									
Windows CE .NET 4.2									
Windows CE .NET 4.1									
Windows CE .NET 4.0									
Microsoft Office Outlook									
Microsoft Office Outlook 2007									
Microsoft Office Outlook 2003									
Microsoft Office Outlook 2002 Standard Edition									
Microsoft Office Outlook 2000 Standard Edition									
Microsoft Entourage									
Microsoft Entourage 2004									
Windows SharePoint Services									
Windows SharePoint Services 3.0									
Windows SharePoint Services 2.0									
SQL Server Notification Services									
SQL Server 2005 Notification Services									
SQL Server 2000 Notification Services									
Microsoft BizTalk Server									
Microsoft BizTalk Server 2006									
Microsoft BizTalk Server 2004									
Microsoft BizTalk Server 2002									
Microsoft BizTalk Server 2000									
Microsoft Commerce Server									
Microsoft Commerce Server 2007									

Microsoft Commerce Server 2002									
Microsoft Commerce Server 2000									
Microsoft Dynamics CRM									
Microsoft Dynamics CRM 4.0									
Microsoft Dynamics CRM 3.0									
Microsoft Dynamics CRM 3.0 Service Provider Edition									
Microsoft Dynamics CRM 3.0 I (Localized for Japanese and Chinese (PRC))									
Microsoft Dynamics CRM Mobile									
Microsoft Groove									
Microsoft Groove 3.1									
Microsoft SharePoint Portal Server									
Microsoft Office SharePoint Server 2007									
Microsoft SharePoint Portal Server 2003									
Microsoft Office Live Meeting									
Microsoft Office Live Meeting									

APPENDIX F – SAMPLE COMMUNICATIONS PLAN

This appendix describes the communications that are recommended for the DST Update Response Plan. The DST coordinator is responsible for ensuring that these communications take place, however the individual content and distribution may be done by other members of the extended DST Update team as appropriate. You should evaluate whether this communication plan is sufficient and appropriate for your organisation and adjust as needed.

> It is good practice to follow tested marketing guidelines – ensure the messaging in each communication is clear and succinct, use a consistent formatting and layout for all communications, and highlight any required actions that are expected from the audience. Use a mix of communication mediums – email, intranet websites, paper-based, workshops – that may be appropriate for your audience.

Name of communication	Timeline	Intended Audience	Description
Internal Awareness Announcement - stakeholders (Email)	<start>	IT Stakeholders Business Stakeholders	This e-mail message starts the DST Update process. High-level overview of the problem, risks, and the organisations' plan to address these. Notification that the systems will be assessed and reviewed. Notification of ownership and contact information. ACTION: IT system and Business service owners to familiarise themselves with the problem and to assist with assessment activities.
Assessment meeting request (Email)	<date>	IT Stakeholders Business Service Owners Technical SME's	The assessment meeting is conducted to determine whether the DST updates need to be applied, to identify the key critical systems that are affected, and to decide on a high-level update plan/strategy. Identify and confirm the key contacts and stakeholders that need to be included in future activities. ACTION: Confirm ownership of the DST Response plan and confirm the accuracy of the communication plan.
Internal Awareness Announcement – Support Employees (Email)	<date>	IT Support Employees	Notification to support employees – Proactive bulletin - High level overview, remind everyone of location of documents, information, call to actions, contact information

Name of communication	Timeline	Intended Audience	Description
Internal Awareness Announcement – All affected users (Email)	<date>	All affected users	Notification to Field/impacted communities – Proactive bulletin - High level overview, remind everyone of DST date changes, location of documents, information, call to actions, contact information. Corporate internal article to drive general awareness of DST, directing users to recommended practice guidance (Web). NOTE: Provide users with some recommended practice actions they can start taking immediately to reduce the impact – like including actual date/time information in the body of any meeting requests, etc.
Internal Action Announcement – Administrative Assistants and Receptionists (Email)	<date>	Administrative Assistants and Receptionists	Awareness of DST effects and recommended practice guidance (See Appendix E)
Windows Mobile Users	<date>	Windows Mobile Users	Guidance to update mobile phones when Exchange Calendar Update Tool or Outlook Time Zone Update Data Tool is run
Application Owners	<date>	LOB application owners	Campaign to ensure critical applications identified, tested, and remediated
System Account owners	<date>	System Account owners	Awareness to validate application behaviour
Deployment Progress Report	<date>	IT Stakeholders Business Stakeholders	This communication is a report of the current DST update deployment, notes every DST update and its current level of implementation.

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APPENDIX G – SAMPLE DEPLOYMENT PLAN

Step	Day	Date	Action		Comments
1.	Fri	2nd Oct	A.	**Start updating Windows** servers	Exchange, BES and TS/Citrix Servers OS remediation should be complete.
			B.	**Start updating Exchange servers** over the weekend (OS updates only)	
			C.	**Start Updating** Terminal Citrix Servers with OS update.	Adds a little randomness to the email and network traffic generated by the meeting updates.
			D.	**Start Updating** All Windows clients with OS update.	
			E.	**Start Updating** All Windows Mobile clients.	
2.	Sat-Sun	3rd Oct – 4th Oct	A.	Ensure Exchange 2003 CDO update KB924335 is applied on all Exchange Servers	**Use Exchange Tool Strategy**
			B.	Run **Microsoft Exchange Calendar Update Tool** against all Exchange calendars.	
3.	Sat	10th Oct	A.	**Update** Remaining Windows Servers (e.g. SharePoint/WSS, SQL Notification Services, DCs, File/Print)-	List of required updates depends on Server Role; some will need more than the OS update.
4.	Mon	12th Oct	A.	Start **assessing** which servers and workstations did not receive the updates.	Re-apply updates accordingly.

APPENDIX H – REFERENCES AND USEFUL WEBSITES

Daylight Savings for Australia and New Zealand:

http://technet.microsoft.com/en-au/bb821275.aspx

Daylight Saving Time Help and Support Center

http://support.microsoft.com/gp/cp_dst

Daylight Saving Time Changes Webcasts:

http://support.microsoft.com/gp/dst_webcasts

Microsoft IT Deployment Guidance:

http://support.microsoft.com/gp/dst_topissues/#a3

Daylight Savings Time Blog:

http://blogs.technet.com/dst2007/

How to address time zone changes with Time Zone Update Tool for Microsoft Outlook:

http://support.microsoft.com/kb/931667/en-us

Windows Mobile Daylight Saving Time:

http://www.microsoft.com/australia/windowsmobile/daylightsaving/default.mspx

Microsoft Support Lifecycle Website:

http://support.microsoft.com/lifecycle/

Exchange Server TechCenter

http://technet.microsoft.com/en-us/library/aa996249.aspx

Microsoft Software Update Solution Accelerators:

http://www.microsoft.com/technet/solutionaccelerators/cits/mo/default.mspx

APPENDIX I – INSTRUCTIONAL VIDEOS FOR REBASING

DST: Cumulative Time Zone Update for Microsoft Windows

http://channel9.msdn.com/ShowPost.aspx?PostID=341535

DST: Using the Outlook v2.0 Time Zone Data Update Tool

http://channel9.msdn.com/ShowPost.aspx?PostID=341649

DST: How to Address Daylight Saving Time in Exchange Server by Using the Exchange Calendar Update Tool v2.0

http://channel9.msdn.com/ShowPost.aspx?PostID=341747

Microsoft Download Center (table of contents included – use as a reference)

VIDEO: Cumulative Time Zone Update for Microsoft Windows and Windows Mobile

http://www.microsoft.com/downloads/details.aspx?FamilyId=1E55473C-80FF-4E87-A48F-3BC872EF39AA&displaylang=en

VIDEO: Using the Time Zone Data Update Tool for Microsoft Office Outlook v2.0

http://www.microsoft.com/downloads/details.aspx?FamilyId=1A511C92-A45B-46ED-9848-64349EEBD040&displaylang=en

VIDEO: Using the Time Zone Data Update Tool for Microsoft Exchange Server v2.0

http://www.microsoft.com/downloads/details.aspx?FamilyId=A05519EF-B698-4A60-8292-D22D35393E43&displaylang=en