RE: Upgrading W2K DC to W2003

Source:
http://www.tech−archive.net/Archive/Windows/microsoft.public.windows.server.migration/2004−11/0259.html

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From: Jack Wang [MSFT] (*jackwa_at_online.microsoft.com*)
Date: 11/10/04

Date: Wed, 10 Nov 2004 01:07:17 GMT

You are welcome! I'm glad that the information is helpful. If you have any questions in the future, please don't hesitate to post in the newsgroup.
Have a great day!

Sincerely,
Jack Wang, MCSE 2000/2003, MCSA 2000/2003, MCDBA, MCSD
Microsoft Online Partner Support

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==========
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==========

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−−−−−−−−−−−−−−−−−−
| Thread−Topic: Upgrading W2K DC to W2003
| thread−index: AcTFfO3CrCutRIMRR3KQ8jA2rYnojg==
| X−WBNR−Posting−Host: 212.138.47.21
| From: "=?Utf−8?B?Um9zaGFuIE1hdGhld3M=?="
<RoshanMathews@discussions.microsoft.com>
| References: <ADED9B0B−1C3E−43FB−94AF−6B03F1E46947@microsoft.com>
<2lY4U0TxEHA.3696@cpmsftngxa10.phx.gbl>
| Subject: RE: Upgrading W2K DC to W2003
| Date: Mon, 8 Nov 2004 02:23:02 −0800
| Lines: 516
| Message−ID: <BD307510−7D41−4841−B21C−EF1251815CE7@microsoft.com>
| MIME−Version: 1.0
| Content−Type: text/plain;
| charset="Utf−8"
| Content−Transfer−Encoding: 7bit
| X−Newsreader: Microsoft CDO for Windows 2000
| Content−Class: urn:content−classes:message
| Importance: normal
| Priority: normal

| X−MimeOLE: Produced By Microsoft MimeOLE V6.00.3790.0
| Newsgroups: microsoft.public.windows.server.migration
| NNTP−Posting−Host: TK2MSFTNGXA03.phx.gbl 10.40.1.29
| Path: cpmsftngxa10.phx.gbl!TK2MSFTNGXA03.phx.gbl
| Xref: cpmsftngxa10.phx.gbl microsoft.public.windows.server.migration:15077
| X−Tomcat−NG: microsoft.public.windows.server.migration
|
| Hi Jack,
| Many thanks for your detailed info... it will help me...
| Best regards, Roshan Mathews
|
| "Jack Wang [MSFT]" wrote:
|
| > Hi Roshan,
| >
| > Thank you for posting!
| >
| > Please refer to the following information for your questions.
| >
| > 1. You only need to run adprep on the schema operations master.
| >
| > 2. You may upgrade other DCs to Windows Server 2003 later.
| >
| > 3. After running the adprep commands, you need to verify that the
commands
| > successfully ran on the schema operations master.
| >
| > To do so, please refer to the following steps.
| >
| > Overview: Upgrading Windows 2000 domain controllers to Windows Server
2003
| >
−−
| >
| > The Windows Server 2003 adprep command that you run from the \I386
folder
| > of the Windows Server 2003 media prepares a Windows 2000 forest and its
| > domains for the addition of Windows Server 2003 domain controllers. The
| > Windows Server 2003 adprep /forestprep command adds the following
features:
| >
| >
| > − Improved default security descriptors for object classes
| >
| > − New user and group attributes
| >
| > − New Schema objects and attributes like inetOrgPerson
| >
| >
| > The adprep utility supports two command−line arguments:
| >

| >
| > adprep /forestprep: Runs forest upgrade operations.
| > adprep /domainprep: Runs domain upgrade operations.
| >
| > The adprep /forestprep command is a one−time operation performed on
the
| > schema operation master (FSMO) of the forest. The forestprep operation
must
| > complete and replicate to the infrastructure master of each domain
before
| > you can run adprep /domainprep in that domain.
| >
| > The adprep /domainprep command is a one−time operation that you run on
the
| > infrastructure operations master domain controller of each domain in
the
| > forest that will host new or upgraded Windows Server 2003 domain
| > controllers. The adprep /domainprep command verifies that the changes
from
| > forestprep have replicated in the domain partition and then makes its
own
| > changes to the domain partition and group policies in the Sysvol share.
| >
| > You cannot perform either of the following actions unless the
/forestprep
| > and the /domainprep operations have completed and replicated to all the
| > domain controllers in that domain:
| >
| > − Upgrade the Windows 2000 domain controllers to Windows Server 2003
| > domain controllers by using Winnt32.exe. Note: You can upgrade the
| > Windows 2000 member servers and computers to Windows Server 2003
member
| > computers whenever you want.
| >
| > − Promote new Windows Server 2003 domain controllers into the domain by
| > using Dcpromo.exe.
| >
| >
| > The domain that hosts the schema operations master is the only domain
where
| > you must run both adprep /forestprep and adprep /domainprep. In all
other
| > domains, you only have to run adprep /domainprep.
| >
| > The adprep /forestprep and the adprep /domainprep commands do not add
| > attributes to the global catalog partial attribute set or cause a full
| > synchronization of the global catalog. The RTM version of adprep
| > /domainprep does cause a full sync of the \Policies folder in the
Sysvol
| > tree. Even if you run forestprep and domainprep several times,
completed

| > operations are performed only one time.
| >
| > After the changes from adprep /forestprep and adprep /domainprep
completely
| > replicate, you can upgrade the Windows 2000 domain controllers to
Windows
| > Server 2003 by running Winnt32.exe from the \I386 folder of the Windows
| > Server 2003 media. Also, you can add new Windows Server 2003 domain
| > controllers to the domain by using Dcpromo.exe.
| >
| >
| > Upgrading the forest with the adprep /forestprep command
| >
| > To prepare a Windows 2000 forest and domains to accept Windows Server
2003
| > domain controllers, follow these steps first in a lab environment, then
in
| > a production environment:
| >
| > 1. Make sure that you have completed all the operations in the "Forest
| > Inventory" phase with special attention to the following items:
| >
| > a. You have created system state backups.
| >
| > b. All the Windows 2000 domain controllers in the forest have
installed
| > all the appropriate hotfixes and service packs.
| >
| > c. End−to−end replication of Active Directory is occurring throughout
the
| > forest
| >
| > d. FRS replicates the file system policy correctly throughout each
domain.
| >
| > 2. Log on to the console of the schema operations master with an
| > account that is a member of the Schema Admins security group.
| >
| > 3. Verify that the schema FSMO has performed inbound replication of the
| > schema partition by typing the following at a Windows NT command prompt:
| >
| > "repadmin /showreps" (without the quotation marks) (repadmin is
installed
| > by the Support\Tools folder of Active Directory.)
| >
| > 4. Early Microsoft documentation recommends that you isolate the schema
| > operations master on a private network before you run adprep
/forestprep.
| > Real−world experience suggests that this step is not necessary and may
| > cause a schema operations master to reject schema changes when it is
| > restarted on a private network. If you want to isolate schema additions

| > that were made by adprep, Microsoft recommends that you temporarily
disable
| > outbound replication of Active Directory with the repadmin command−line
| > utility. To do this, following these steps:
| >
| > a. Click "Start", click "Run", type "cmd" (without the quotation
marks),
| > and then click "OK".
| >
| > b. Type the following, and then press ENTER:
| >
| > "repadmin /options +DISABLE_OUTBOUND_REPL" (without the quotation
marks)
| >
| > 5. Run adprep on the schema operations master. To do so, click "Start",
| > click "Run", type "cmd" (without the quotation marks), and then click
| > "OK". On the schema operations master, type the following command
| >
| > "<X:\I386\>adprep /forestprep" (without the quotation marks) where
| > <X:\I386\> is the path of the Windows Server 2003 installation media.
This
| > command runs the forest−wide schema upgrade.
| >
| > Note Events with event ID 1153 that are logged in the Directory Service
| > event log, such as the sample that follows, can be ignored:
| >
| >
| > Event Type : Error
| > Event Source : NTDS General
| > Event Category: Internal Processing
| > Event ID : 1153
| > Date: MM/DD/YYYY
| > Time: HH:MM:SS AM|PM
| > User : Everyone Computer : <some DC>
| > Description: Class identifier 655562 (class name
| > msWMI−MergeablePolicyTemplate) has an invalid superclass 655560.
| > Inheritance ignored.
| >
| > 6. Verify that the adprep /forestprep command successfully ran on the
| > schema operations master. To do so, from the console of the schema
| > operations master, verify the following items:
| >
| > − The adprep /forestprep command completed without error.
| >
| > − The CN=Windows2003Update object is written under
| > CN=ForestUpdates,CN=Configuration,DC=<forest_root_domain>. Record the
value
| > of the Revision attribute.
| >
| > − (Optional) The schema version incremented to version 30. To do so,
see

| > the ObjectVersion attribute under
| > CN=Schema,CN=Configuration,DC=<forest_root_domain>.If adprep
/forestprep
| > does not run, verify the following items:
| >
| > − The fully qualified path for Adprep.exe located in the \I386 folder
of
| > the installation media was specified when adprep ran. To do so, type
the
| > following command:
| >
| > "<x>:\i386\adprep /forestprep" (without the quotation marks) where
<x>
| > is the drive that hosts the installation media.
| >
| > − The logged on user who runs adprep has membership to the Schema
Admins
| > security group. To verify this, use the whoami /all command.
| >
| > − If adprep still does not work, view the Adprep.log file in the
| > %systemroot%\System32\Debug\Adprep\Logs\<Latest_log> folder.
| >
| > 7. If you disabled outbound replication on the schema operations master
in
| > step 4, enable replication so that the schema changes that were made by
| > adprep /forestprep can propagate. To do this, following these steps:
| >
| > a. Click "Start", click "Run", type "cmd" (without the quotation
marks),
| > and then click "OK".
| >
| > b. Type the following, and then press ENTER:
| >
| > "repadmin /options −DISABLE_OUTBOUND_REPL" (without the quotation
marks)
| >
| > 8. Verify that the adprep /forestprep changes have replicated on all
the
| > domain controllers in the forest. It is useful to monitor the following
| > attributes:
| >
| > a. Incrementing the schema version
| >
| > b. The CN=Windows2003Update,
| > CN=ForestUpdates,CN=Configuration,DC=<forest_root_domain> or
| > CN=Operations,CN=DomainUpdates,CN=System,DC=<forest_root_domain> and
the
| > operations GUIDs under it have replicated in.
| >
| > c. Search for new schema classes, objects, attributes, or other
changes

| > that adprep /forestprep adds, such as inetOrgPerson. View the
Sch<XX>.ldf
| > files (where <XX> is a number between 14 and 30) in the
| > %systemroot%\System32 folder to determine what objects and attributes
| > there should be. For example, inetOrgPerson is defined in Sch18.ldf.
| >
| > 9. Look for mangled LDAPDisplayNames.
| >
| > If Exchange 2000 was installed before you ran the Windows Server 2003
| > adprep /forestprep command, see the "How to Identify Mangled Name
| > Attributes" section of the following article in the Microsoft Knowledge
| > Base:
| >
| > KBLink:314649.KB.[LN]: Windows Server 2003 adprep /forestprep command
| > causes mangled attributes in Windows 2000 forests that contain
Exchange
| > 2000 serversIf you find mangled names, go to Scenario 3 of the
"Exchange
| > 2000 in Windows 2000 Forests" section of the same article.
| >
| > 10. Log on to the console of the schema operations master with an
| > account that is a member of the Schema Admins group security group
of
| > the forest that hosts the schema operations master.
| >
| > Upgrading the domain with the adprep /domainprep command
| >
| > Run adprep /domainprep after the /forestprep changes fully replicate to
the
| > infrastructure master domain controller in each domain that will host
| > Windows Server 2003 domain controllers. To do so, follow these steps:
| >
| > 1. Identify the infrastructure master domain controller in the domain
| > you are upgrading, and then log on with an account that is a member
of
| > the Domain Admins security group in the domain you are upgrading.
Note:
| > The enterprise administrator may not be a member of the Domain
Admins
| > security group in child domains of the forest.
| >
| > 2. Run adprep /domainprep on the Infrastructure master. To do so, click
| > Start, click Run, type "cmd" (without the quotation marks), and then
on
| > the Infrastructure master type the following command:
| >
| > "X:\I386\adprep /domainprep" (without the quotation marks) where
X:\I386\
| > is the path of the Windows Server 2003 installation media. This command
| > runs domain−wide changes in the target domain.
| >

| > Note: The adprep /domainprep command modifies files permissions in the
| > Sysvol share. These modifications cause a full synchronization of files
in
| > that directory tree.
| >
| > 3. Verify that domainprep completed successfully. To do so, verify the
| > following items:
| >
| > − The adprep /domainprep command completed without error.
| >
| > − The CN=Windows2003Update,CN=DomainUpdates,CN=System,DC=<dn path of
| > domain you are upgrading> exists If adprep /domainprep does not run,
verify
| > the following items:
| >
| > − The logged on user who runs adprep has membership to the Domain
Admins
| > security group in the domain being you are upgrading. To do so, use the
| > whoami /all command.
| >
| > − The fully qualified path for Adprep.exe located in the \I386
directory
| > of the installation media was specified when you ran adprep. To do so,
at a
| > command prompt type the following command:
| >
| > "<x>:\i386\adprep /forestprep" (without the quotation marks) where
<x>
| > is the drive that hosts the installation media.
| >
| > − If adprep still does not work, view the Adprep.log file in the
| > %systemroot%\System32\Debug\Adprep\Logs\<Latest_log> folder.
| >
| > 4. Verify that the adprep /domainprep changes have replicated. To do
so,
| > for the remaining domain controllers in the domain, verify the
following
| > items:
| >
| > − The CN=Windows2003Update,CN=DomainUpdates,CN=System,DC=<dn path of
| > domain you are upgrading> object exists and the value for the Revision
| > attribute matches the value of the same attribute on the infrastructure
| > master of the domain.
| >
| > − (Optional) Look for objects, attributes or access control list (ACL)
| > changes that adprep /domainprep added.Repeat steps 1−4 on the
| > infrastructure master of the remaining domains in bulk or as you add or
| > upgrade DC's in those domains to Windows Server 2003. Now you can
promote
| > new Windows Server 2003 computers into the forest by using DCPROMO. Or,
you

| > can upgrade existing Windows 2000 domain controllers to Windows Server
2003
| > by using WINNT32.EXE.
| >
| > Upgrading Windows 2000 domain controllers by using Winnt32.exe
| > −−
| >
| > After the changes from /forestprep and /domainprep completely replicate
and
| > you have made a decision about security interoperability with
| > earlier−version clients, you can upgrade Windows 2000 domain
controllers to
| > Windows Server 2003 and add new Windows Server 2003 domain controllers
to
| > the domain.
| >
| > The following computers must be among the first domain controllers that
run
| > Windows Server 2003 in the forest in each domain:
| > − The domain naming master in the forest so that you can create default
| > DNS program partitions.
| > − The primary domain controller of the forest root domain so that the
| > enterprise−wide security principals that Windows Server 2003's
| > forestprep adds become visible in the ACL editor.
| > − The primary domain controller in each non−root domain so that you can
| > create new domain−specific Windows 2003 security principals.
| >
| >
| > To do so, use WINNT32 to upgrade existing domain controllers that host
the
| > operational role you want. Or, transfer the role to a newly−promoted
| > Windows Server 2003 domain controller. Perform the following steps for
each
| > Windows 2000 domain controller that you upgrade to Windows Server 2003
with
| > WINNT32 and for each Windows Server 2003 workgroup or member computer
that
| > you promote:
| >
| > 1. Before you use WINNT32 to upgrade Windows 2000 member computers and
| > domain controllers, remove Windows 2000 Administration Tools. To do
so,
| > use the Add/Remove Programs tool in Control Panel. (Windows 2000
| > upgrades only.)
| >
| > 2. Install any hotfix files or other fixes that either Microsoft or the
| > administrator determines is important.
| >
| > 3. Check each domain controller for possible upgrade issues. To do so,
run
| > the following command from the \I386 folder of the installation media:

| >
| > "winnt32.exe /checkupgradeonly" (without the quotation marks)Resolve
any
| > issues that the compatibility check identifies.
| >
| > 4. Run WINNT32.EXE from the \I386 folder of the installation media, and
| > the restart the upgraded 2003 domain controller.
| >
| > 5. Lower the security settings for earlier−version clients as required.
| >
| > If Windows NT 4.0 clients do not have NT 4.0 SP6 or Windows 95 clients
do
| > not have the directory service client installed, disable SMB Service
| > signing on the Default Domain Controllers policy on the Domain
Controllers
| > organizational unit, and then link this policy to all organizational
units
| > that host domain controllers.
| >
| > Computer Configuration\Windows Settings\Security Settings\Local
| > Policies\Security Options\Microsoft Network Server: Digitally sign
| > communications (always)
| >
| > 6. Verify the health of the upgrade using the following data points:
| >
| > − The upgrade completed successfully.
| >
| > − The hotfixes that you added to the installation successfully
replaced
| > the original binaries.
| >
| > − Inbound and outbound replication of Active Directory is occurring
for
| > all naming contexts held by the domain controller.
| >
| > − The Netlogon and Sysvol shares exist.
| >
| > − The event log indicates that the domain controller and its services
are
| > healthy.
| >
| > Note: You may receive the following event message after you upgrade:
| >
| >
| >
| >
| >
| > Event Type: Error
| > Event Source: NTDS Backup
| > Event Category: Backup
| > Event ID: 1913

| > Date: <Date>
| > Time: HH:MM:SSAM|PM
| > User: N/A
| > Computer: <computername>
| > Description: Internal error: The Active Directory backup and restore
| > operation encountered an unexpected error. Backup or restore will not
| > succeed until this is corrected. You can safely ignore this event
message.
| >
| > 7. Install the Windows Server 2003 Administration Tools (Windows 2000
| > upgrades and Windows Server 2003 non−domain controllers only).
| > Adminpak.msi is in the \I386 folder of the Windows Server 2003
CD−ROM.
| > Windows Server 2003 media contains updated support tools in the
| > Support\Tools\Suptools.msi file. Make sure that you reinstall this
file.
| >
| > 8. Make new backups of at least the first two Windows 2000 domain
| > controllers that you upgraded to Windows Server 2003 in each domain
in
| > the forest. Locate the backups of the Windows 2000 computers that
you
| > upgraded to Windows Server 2003 in locked storage so you do not
| > accidentally use them to restore a domain controller that now runs
| > Windows Server 2003.
| >
| > 9. (Optional) Perform an offline defragmentation of the Active
Directory
| > database on the domain controllers that you upgraded to Windows Server
2003
| > after the single instance store (SIS) has completed (Windows 2000
upgrades
| > only).
| >
| > The SIS reviews existing permissions on objects stored in Active
Directory,
| > and then applies a more efficient security descriptor on those objects.
The
| > SIS starts automatically (identified by event 1953 in the directory
service
| > event log) when upgraded domain controllers first start the Windows
Server
| > 2003 operating system. You benefit from the improved security
descriptor
| > store only when you log an event ID 1966 event message in the directory
| > service event log:
| >
| >
| > Event Type: Information
| > Event Source: NTDS SDPROP
| > Event Category: Internal Processing

| > Event ID: 1966
| > Date: MM/DD/YYYY
| > Time: HH:MM:SS AM|PM
| > User: NT AUTHORITY\ANONYMOUS LOGON
| > Computer: <computername>
| > Description: The security descriptor propagator has completed a full
| > propagation pass.
| > Allocated space (MB):
| > XX Free space (MB): XX
| >
| > This may have increased free space in the Active Directory database.
| > User Action: Consider defragmenting the database offline to reclaim
the
| > free space that may be available in the Active Directory database. For
more
| > information, see Help and Support Center at
| > http://go.microsoft.com/fwlink/events.asp. This event message indicates
| > that the single instance store operation has completed and serves as a
| > queues the administrator to perform of offline defragmentation of the
| > Ntds.dit using NTDSUTIL.EXE.
| >
| > The offline defragmentation can reduce the size of a Windows 2000
Ntds.dit
| > file by up to 40%, improves Active Directory performance, and updates
the
| > pages in the database for more efficient storage of Link Valued
attributes.
| >
| >
| > 10. Investigate the DLT Server Service. Windows Server 2003 domain
| > controllers disable the DLT Server service on fresh and upgrade
installs.
| > If Windows 2000 or Windows XP clients in your organization use the DLT
| > Server service, use Group Policy to enable the DLT Server service on
new or
| > upgraded Windows Server 2003 domain controllers. Otherwise,
incrementally
| > delete distributed link tracking objects from Active Directory.
| >
| > 11. Configure the best practice organizational unit structure.
Microsoft
| > recommends that administrators actively deploy the best practice
| > organizational unit structure in all the Active Directory domains, and
| > after they upgrade or deploy Windows Server 2003 domain controllers in
| > Windows Domain mode, redirect the default containers that
earlier−version
| > APIs use to create users, computers and groups to an organizational
unit
| > container that the administrator specifies.
| >
| > 12. Repeat steps 1 through 10 as required for each new or upgraded

Windows
| > Server 2003 domain controller in the forest and step 11 (Best Practice
| > organizational unit structure) for each Active Directory domain.
| >
| > For more information, please refer to the following article.
| >
| > 325379 How to upgrade Windows 2000 domain controllers to Windows Server
2003
| > http://support.microsoft.com/?id=325379
| >
| > Hope this helps!
| >
| > Sincerely,
| > Jack Wang, MCSE 2000/2003, MCSA 2000/2003, MCDBA, MCSD
| > Microsoft Online Partner Support
| >
| > Get Secure! − www.microsoft.com/security
| >
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| > −−−−−−−−−−−−−−−−−−−
| > | Thread−Topic: Upgrading W2K DC to W2003
| > | thread−index: AcTFA4vUuiv4jKV9SrqdTjy9+SBSHg==
| > | X−WBNR−Posting−Host: 212.138.47.11
| > | From: =?Utf−8?B?Um9zaGFu?= <Roshan@discussions.microsoft.com>
| > | Subject: Upgrading W2K DC to W2003
| > | Date: Sun, 7 Nov 2004 11:54:09 −0800
| > | Lines: 14
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| > | X−Newsreader: Microsoft CDO for Windows 2000
| > | Content−Class: urn:content−classes:message
| > | Importance: normal
| > | Priority: normal
| > | X−MimeOLE: Produced By Microsoft MimeOLE V6.00.3790.0
| > | Newsgroups: microsoft.public.windows.server.migration
| > | NNTP−Posting−Host: TK2MSFTNGXA03.phx.gbl 10.40.1.29
| > | Path: cpmsftngxa10.phx.gbl!TK2MSFTNGXA03.phx.gbl
| > | Xref: cpmsftngxa10.phx.gbl
microsoft.public.windows.server.migration:15054
| > | X−Tomcat−NG: microsoft.public.windows.server.migration
| > |

| > | Good Day to All,
| > |
| > | i have 5 DC (W2k) in three sites under one domain. i am planning to
| > upgrade
| > | the them to W2003. Kindly advice :
| > | 1. Do i need to run the adprep on the Main server(OperationsMaster)
in
| > one
| > | site or do i need to do it on all my DCs.
| > | 2. Does all the other DC need to upgraded to windows 2003 immedaitely
or
| > can
| > | i do it later stage.
| > | 3. After running the adprep on the Main server, how long can i wait
| > before
| > | starting the upgrade process. If i wait does it affect any process or
| > | updation or anything...
| > |
| > | Best Regards,
| > | Roshan
| > |
| >
| >
|