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August 29, 2012

How to Rename Your Active Directory Domain

By Ashraf Al-Dabbas (http://blog.pluralsight.com/author/ashraf-al-dabbas)

Choosing a name for your domain (/blog/choose-internal-top-level-domain-name) is an important decision which will have many technical repercussions on the topology of your network infrastructure. Still, choosing a domain name is largely a business decision that is influenced greatly by the organization structure and needs.

The problem is that there is almost nothing more variable than the business environment and its needs. For example an organization restructuring may mean renaming some sub domains and/or changing their hierarchy, while a change of the company name will defiantly force a domain name change (a frightening prospect for many Windows administrators).

I was put in such a situation where a company that I am working with as an IT consultant had grown from a small design company of 20 employees with the name of Untilled Studios to became a successful group of companies employing 150+ person with the name of Think Arabia. For a while I ignored the problem but their needs have also developed and they started to need an internal SharePoint site with the name of the new organization and sub-sites for the different companies. It became obvious that a domain rename was needed.

I found that the procedure is very simple and can be easily done. Although there is nothing terrifying about it, I strongly suggest that you do as I did and try it in a test environment. I've installed the following virtual machines:

Two Domain controllers (DC0 and DC1): One domain controller can do, but I wanted to match the production environment as closely as I can.


(http://www.trainsignal.com/blog/wp-content/uploads/2012/08/1-Production-Environment.png)
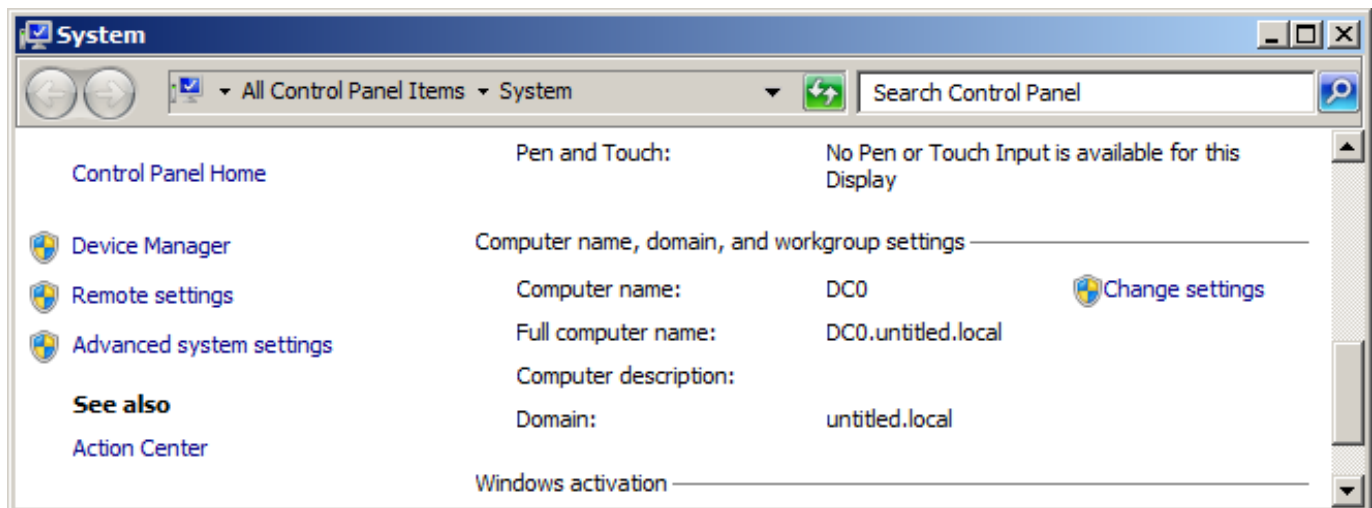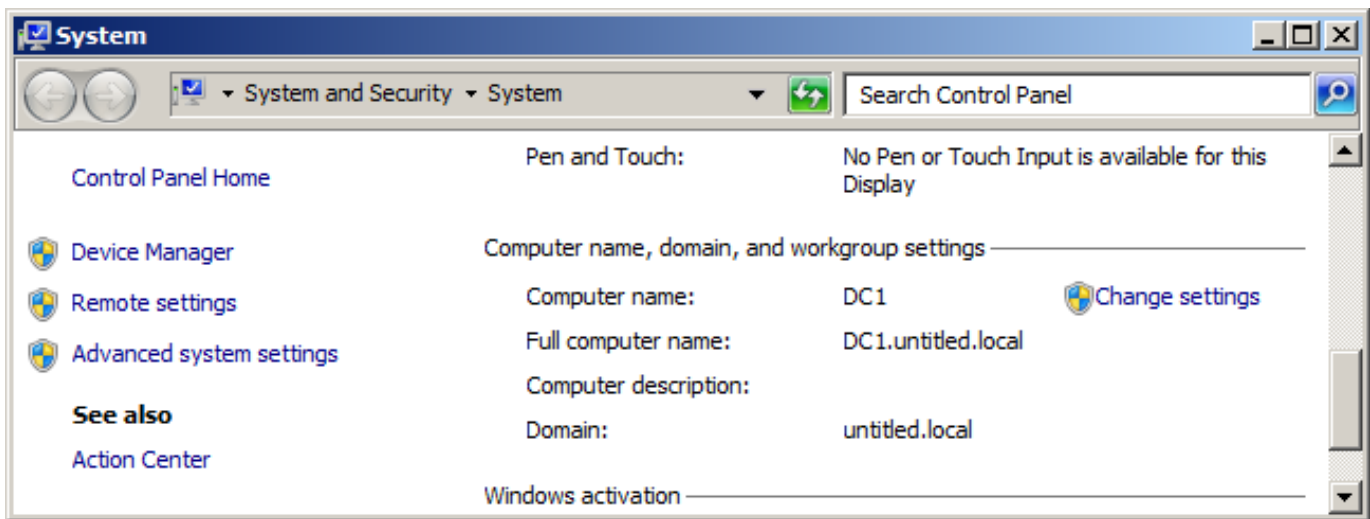
One member server and/or one member workstation: Actually I created two of each to see the effect on member machines that were powered off during the procedure and member machines that were powered on. However, it turned out that all four machines I created acted in the same exact way regardless of whether they were on or off while I was renaming the domain 😊
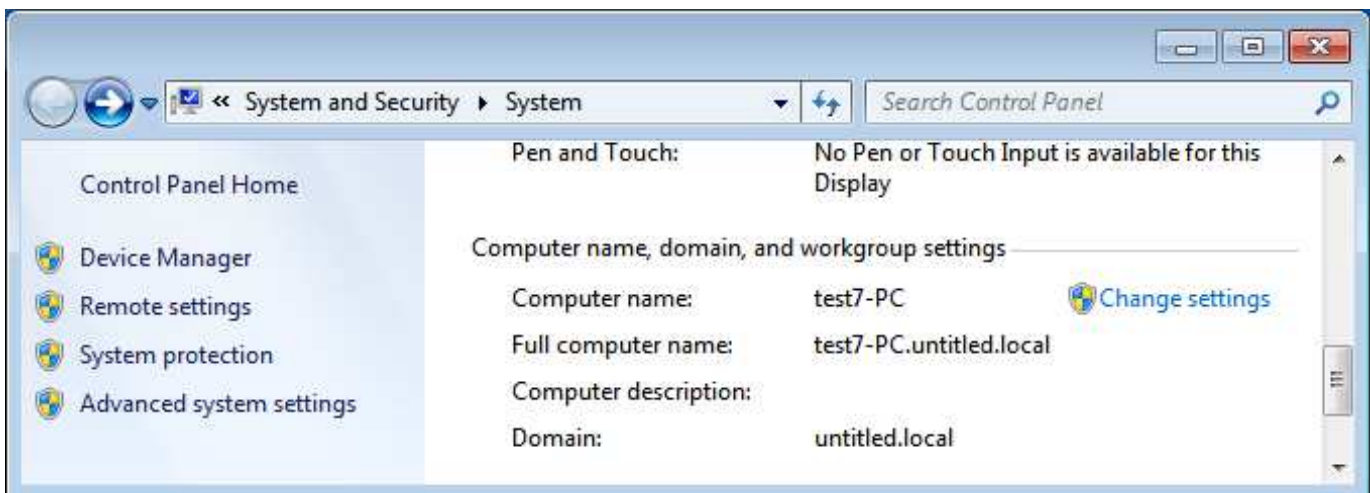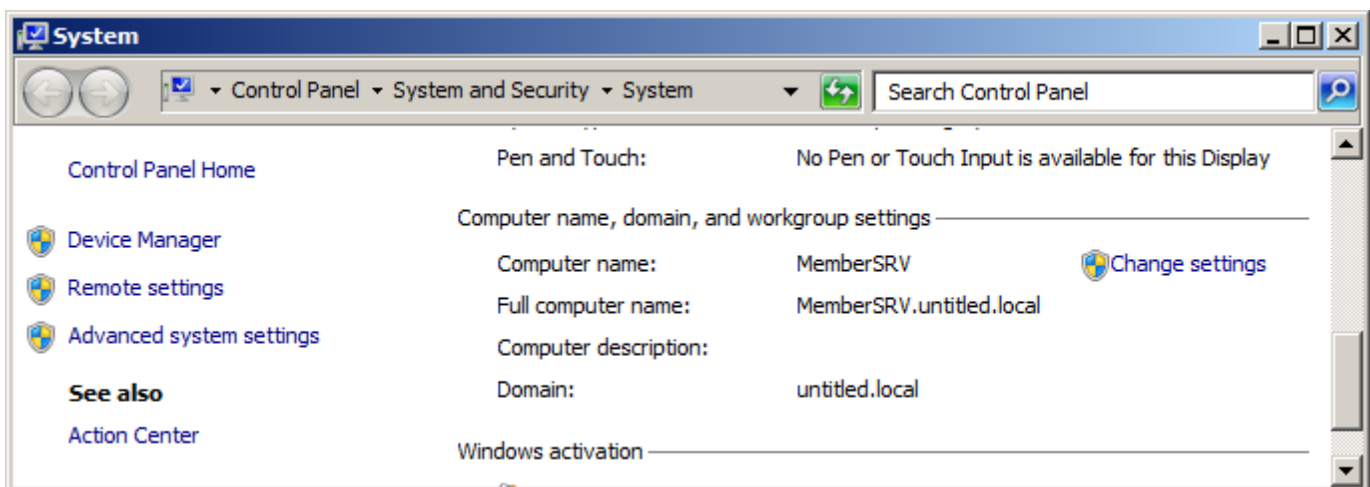
And the key to the procedure is one domain member machine that is not a domain controller to perform almost all steps from. This can be a Windows 7 machine with Remote Server Administration Tool (http://www.microsoft.com/download/en/details.aspx?id=7887) (RSAT) installed, but I prefer to use Windows 2008 R2 server since the **rendom** utility gets installed automatically as part of "Active Directory Domain Services" role. But make sure not to promote the machine to a domain controller as this machine should not be a domain controller.
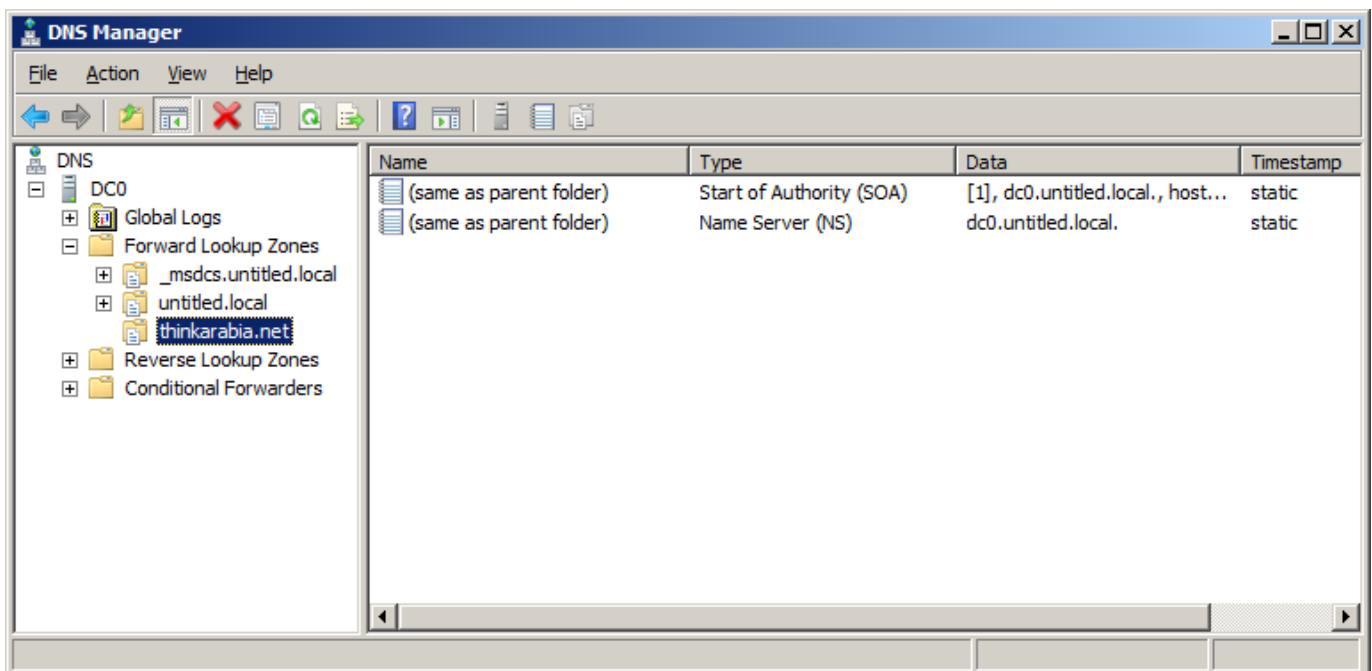

(http://www.trainsignal.com/blog/wp-content/uploads/2012/08/5-Production-Environment.png)
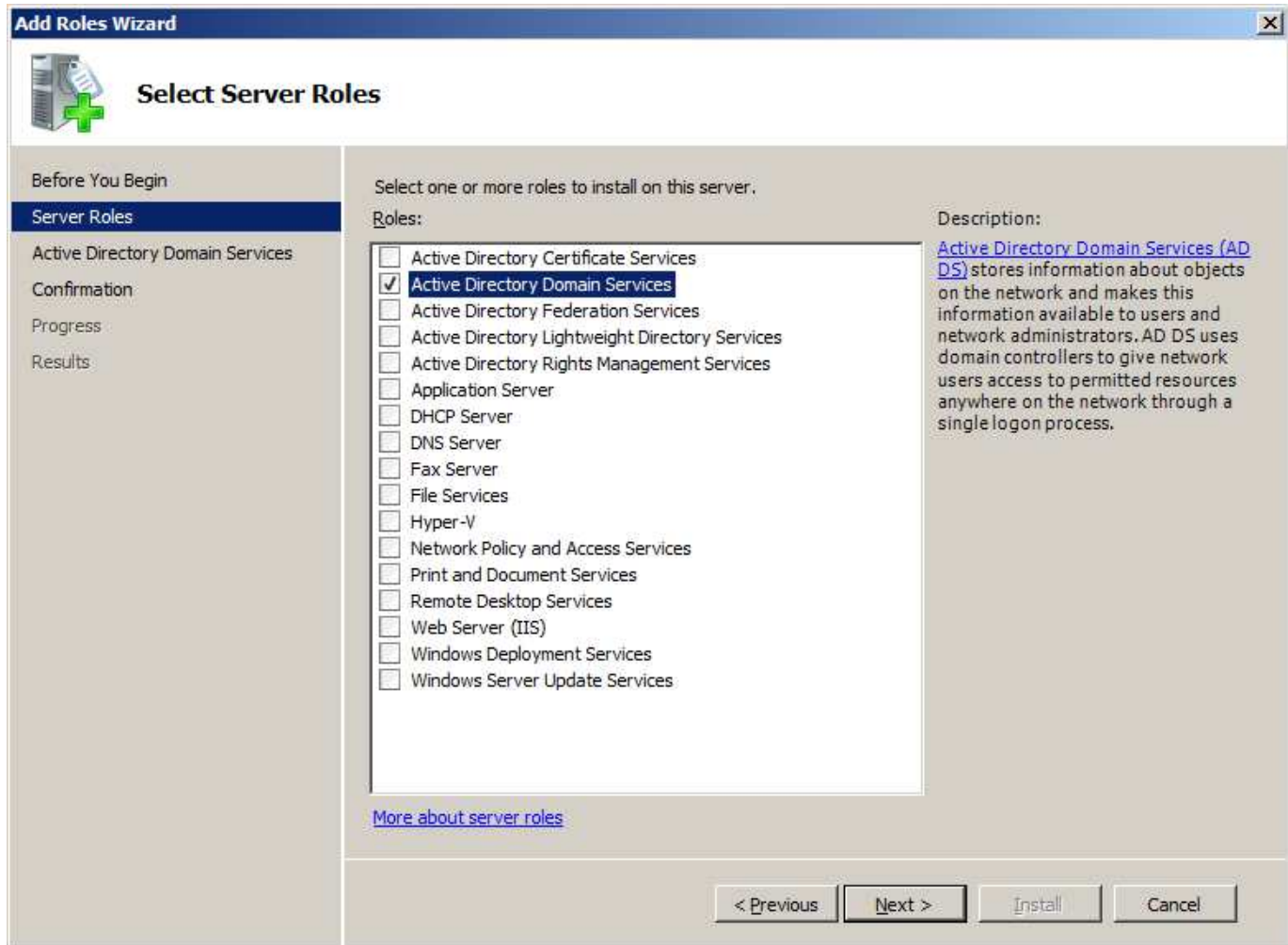
Step 0: Create a new DNS zone with the new domain. As new records will start being created in that zone as soon as we perform the rename.
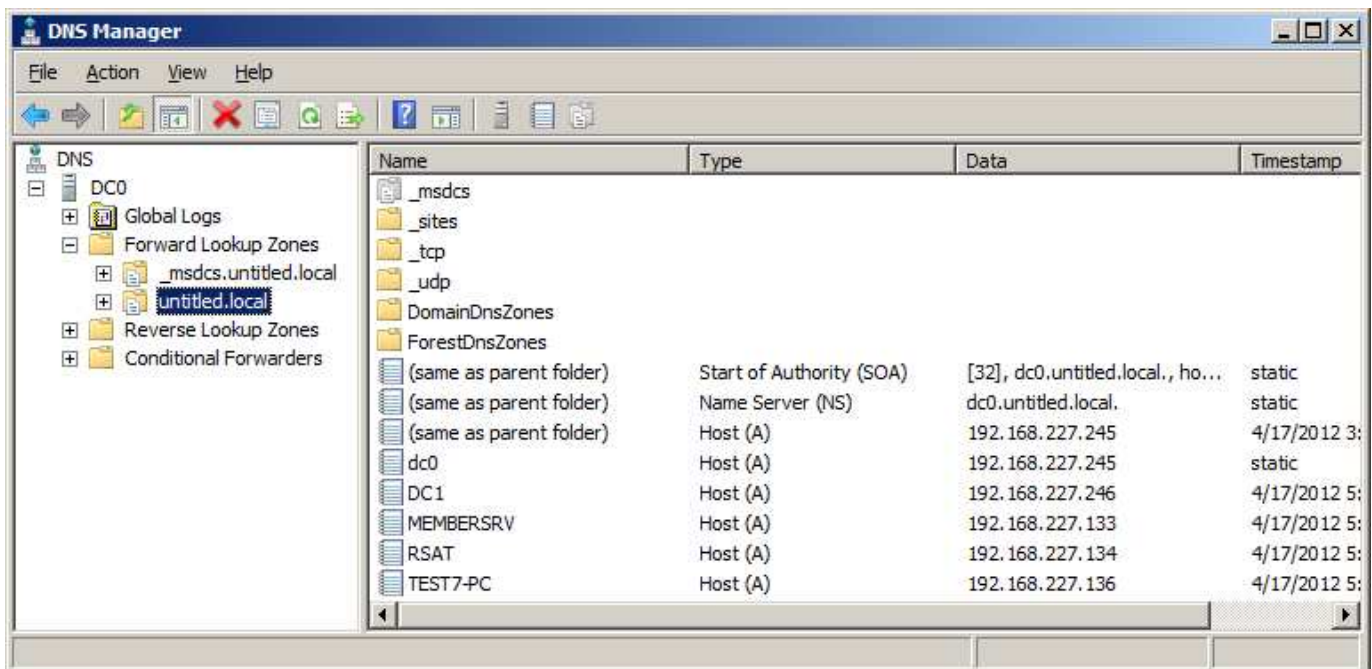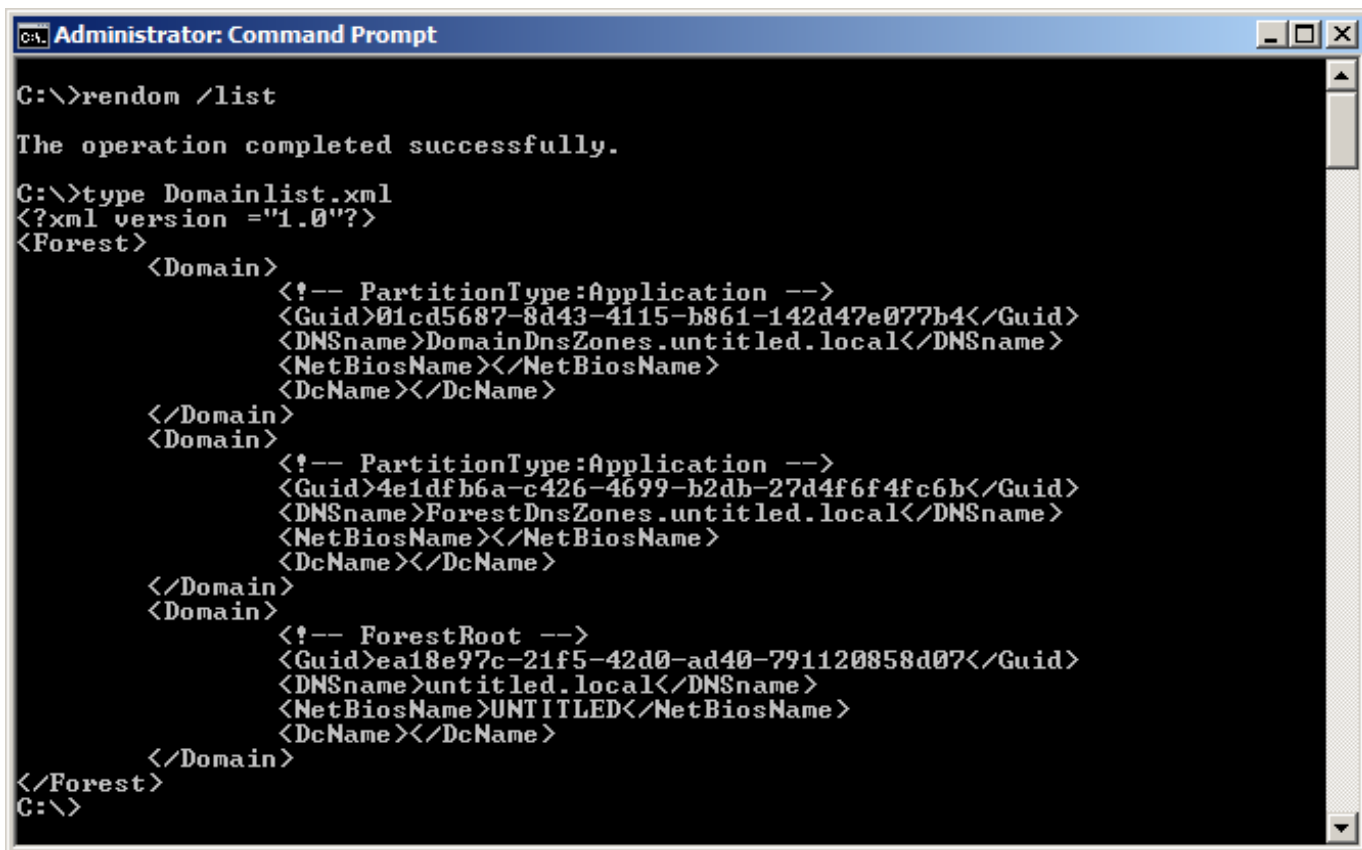
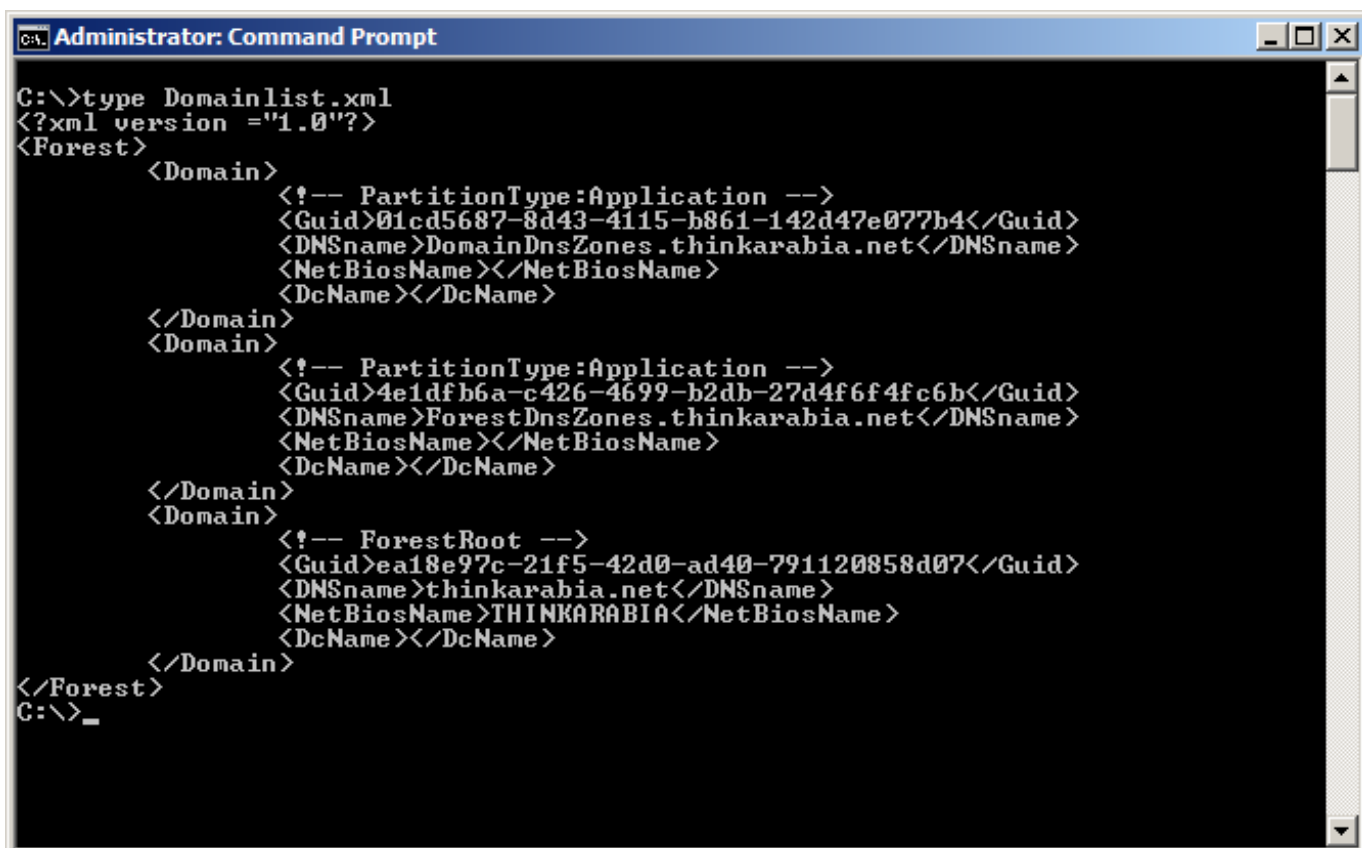Step 1: From the Control Station run the **rendom /list** command.

An xml file will be created that lists the current domain information, namely **ForestDNSZones**, **DomainDNSZones** and **NetBios** name.

```
Administrator: Command Prompt                                        _ | □ | X

C:\>rendom /list

The operation completed successfully.

C:\>type Domainlist.xml
<?xml version ="1.0"?>
<Forest>
        <Domain>
                <!-- PartitionType:Application -->
                <Guid>01cd5687-8d43-4115-b861-142d47e077b4</Guid>
                <DNSname>DomainDnsZones.untitled.local</DNSname>
                <NetBiosName></NetBiosName>
                <DcName></DcName>
        </Domain>
        <Domain>
                <!-- PartitionType:Application -->
                <Guid>4e1dfb6a-c426-4699-b2db-27d4f6f4fc6b</Guid>
                <DNSname>ForestDnsZones.untitled.local</DNSname>
                <NetBiosName></NetBiosName>
                <DcName></DcName>
        </Domain>
        <Domain>
                <!-- ForestRoot -->
                <Guid>ea18e97c-21f5-42d0-ad40-791120858d07</Guid>
                <DNSname>untitled.local</DNSname>
                <NetBiosName>UNTITLED</NetBiosName>
                <DcName></DcName>
        </Domain>
</Forest>
C:\>
```

(http://www.trainsignal.com/blog/wp-content/uploads/2012/08/Step-1-Run-rendom.png)
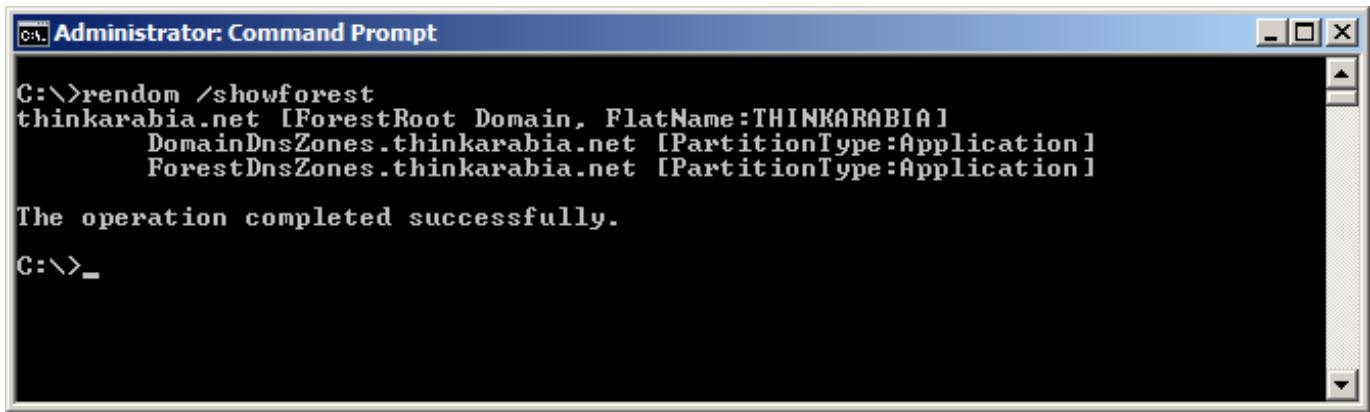
Step 2: Edit this file to replace all mention of the old domain with the new domain name. In this case I've replaced all occurrences of untitled.local with thinkarabia.net and all occurrences UNTITLED with THINKARABIA.

```
Administrator: Command Prompt                                        _ | □ | X

C:\>type Domainlist.xml
<?xml version ="1.0"?>
<Forest>
        <Domain>
                <!-- PartitionType:Application -->
                <Guid>01cd5687-8d43-4115-b861-142d47e077b4</Guid>
                <DNSname>DomainDnsZones.thinkarabia.net</DNSname>
                <NetBiosName></NetBiosName>
                <DcName></DcName>
        </Domain>
        <Domain>
                <!-- PartitionType:Application -->
                <Guid>4e1dfb6a-c426-4699-b2db-27d4f6f4fc6b</Guid>
                <DNSname>ForestDnsZones.thinkarabia.net</DNSname>
                <NetBiosName></NetBiosName>
                <DcName></DcName>
        </Domain>
        <Domain>
                <!-- ForestRoot -->
                <Guid>ea18e97c-21f5-42d0-ad40-791120858d07</Guid>
                <DNSname>thinkarabia.net</DNSname>
                <NetBiosName>THINKARABIA</NetBiosName>
                <DcName></DcName>
        </Domain>
</Forest>
C:\>_
```
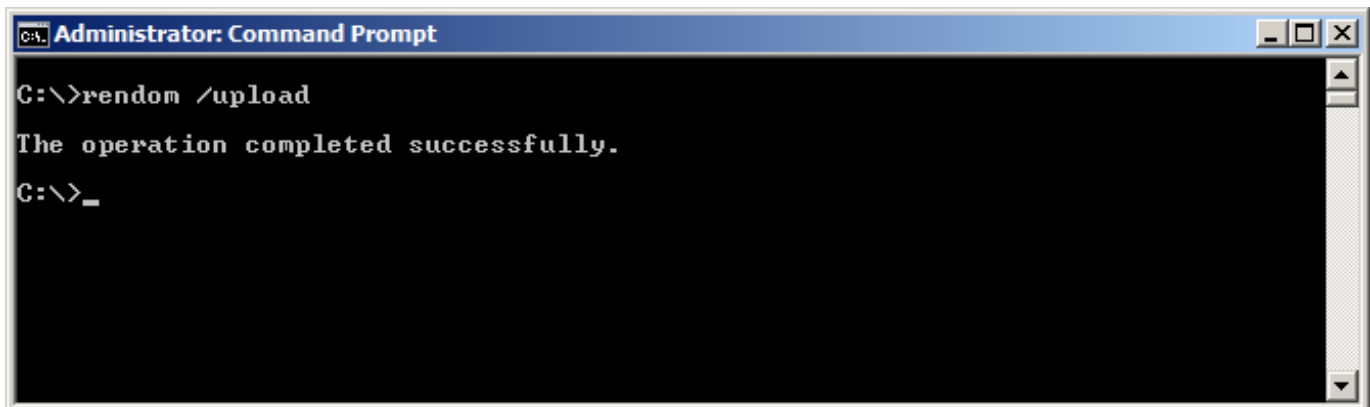
(http://www.trainsignal.com/blog/wp-content/uploads/2012/08/Step-2-Edit-domain.png)

You can verify the new configuration using the **rendom /showforest** command:

Step 3: Now that we feel more confident, it is time to upload the modified xml to our domain controllers using the command **random /upload**.

Step 4: Is to verify the radiance of the domain controllers using Run **random /prepare**.

Here is where I 1st faced an unexpected issue. In my first attempt, both of my test domain controllers were not prepared, but worked fine after turning off the Windows firewall. When I repeated the procedure, only one of the domain controllers gave an error while the other did not have any issues although the firewall was on. When I did it in production I turned the firewall off on all DC just in case, and it went fine on the first attempt.

Step 5: The grand moment has come when you do the transfer **rendom /execute**.

All your domain controllers will start to reboot at the same time!!!

Step 6: In order to continue you need to make your control server (the one we have been working with so far) aware of the domain name change. For that you will need to reboot it twice. Otherwise it will continue to use credentials from the old domain and will no longer be able perform changes on the new domain. By the way, all member servers and workstations will need to be rebooted twice to reflect the change, but not yet 😊

Normally at first, all your machines will suggest logging in using the old domain name. No need for alarm, it is just remembering what user name you've used last time you have logged in. You simply need to switch user and login with the new domain name.

(http://www.trainsignal.com/blog/wp-

content/uploads/2012/08/Step-6-Make-your-control-server.png)
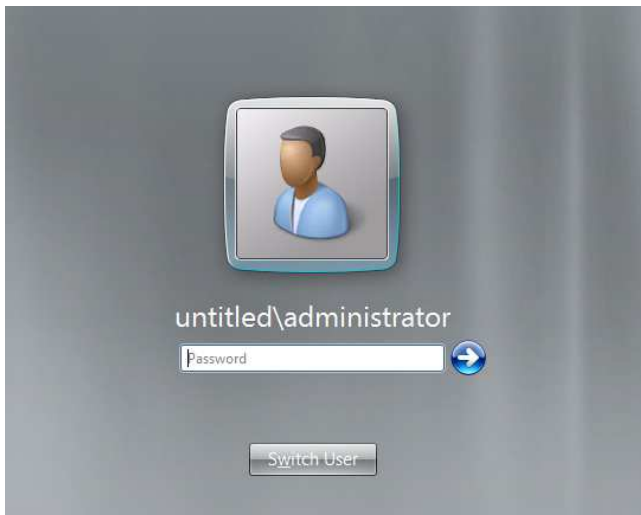
(http://www.trainsignal.com/blog/wp-content/uploads/2012/08/Step-6-Make-your-control-server-2.png)
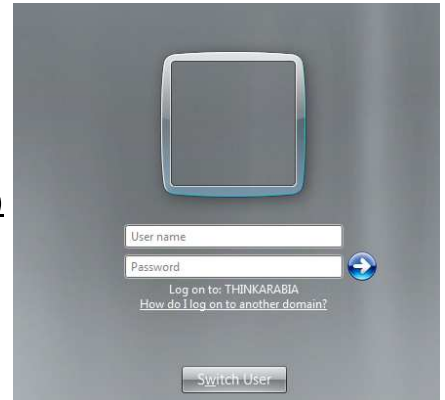
Step 7: Reflecting the domain name change on your Group Polices.

Group polices still reference the old domain names, and hence we need to fix it.
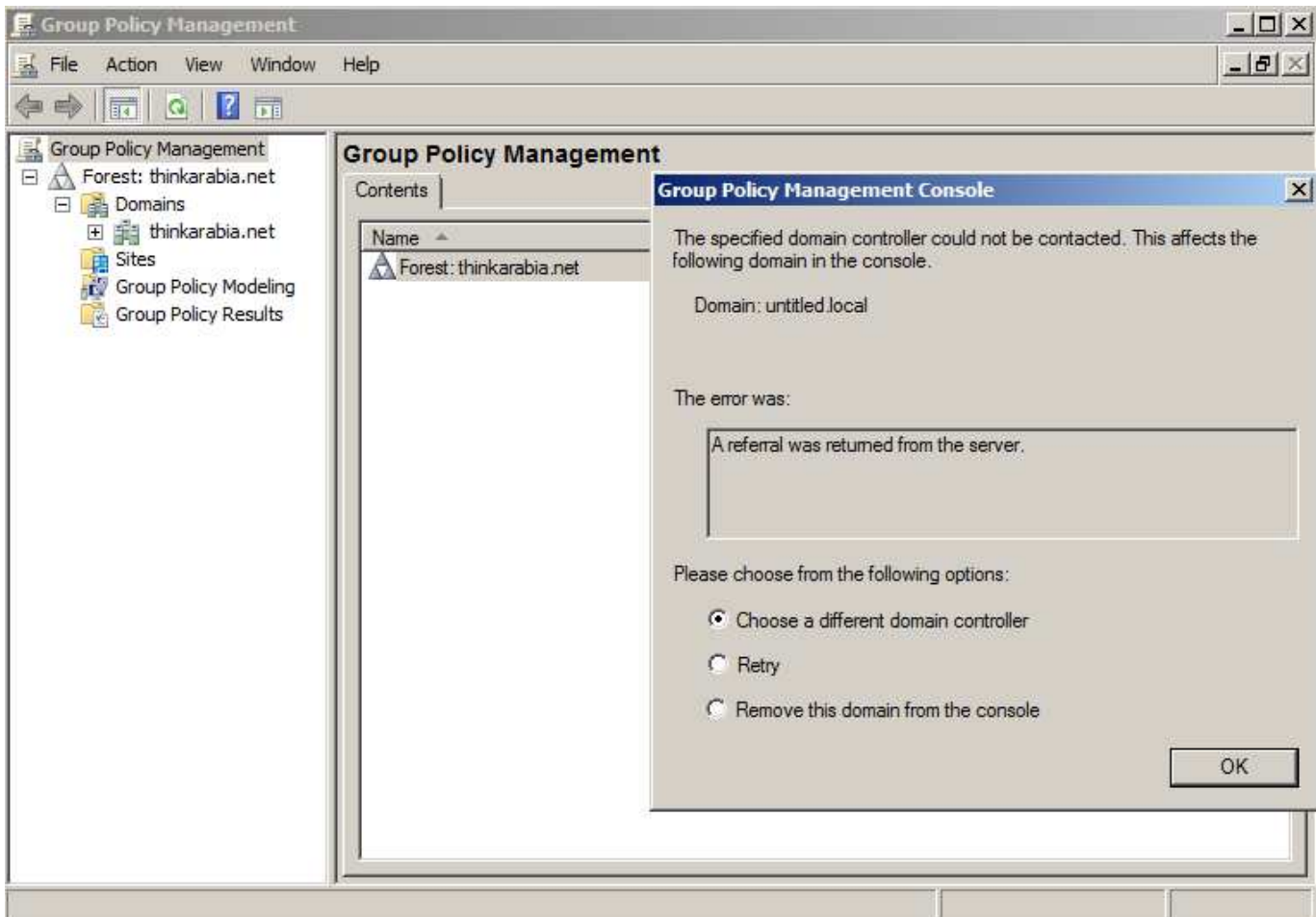
This is easily performed using the following two commands:

gpfixup /olddns: untitled.local /newdns:thinkarabia.ent

gpfixup /oldnb:UNTITLED /newnb:THINKARABIA
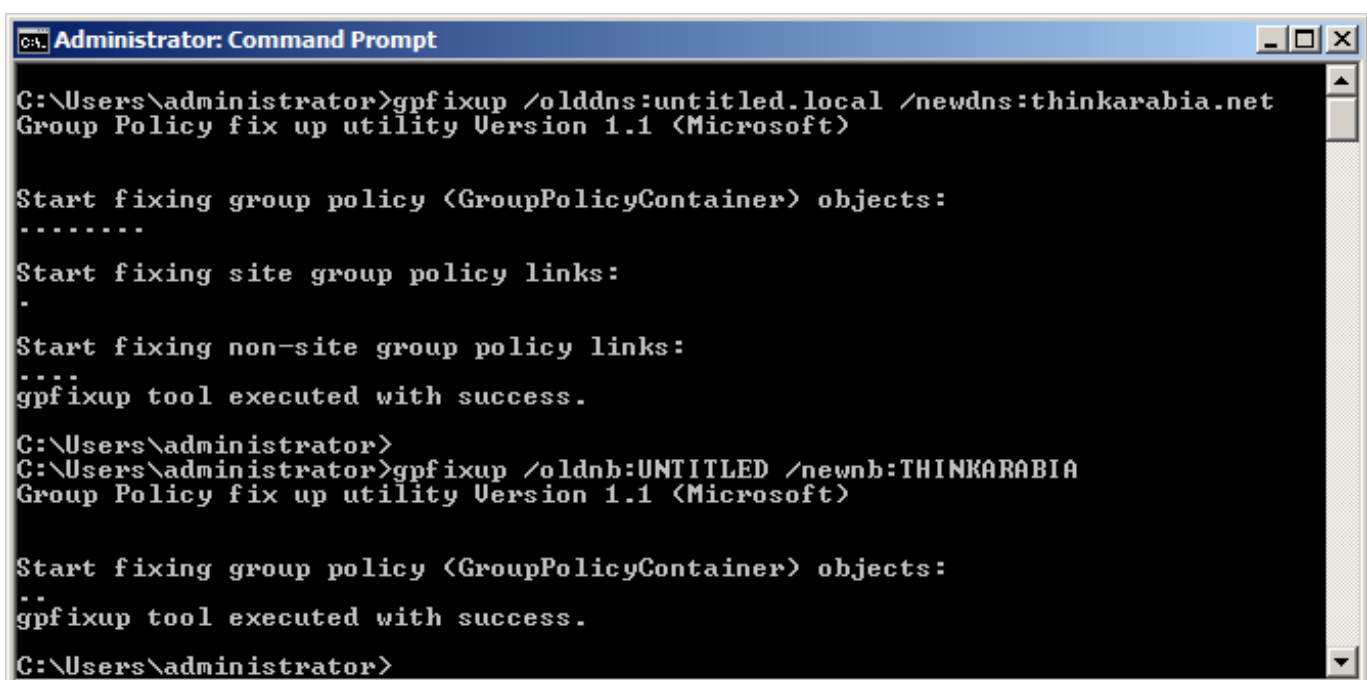
Step 8: Renaming the domain controllers themselves.

Unfortunately they do not get automatically renamed by rebooting twice; you will need to do it using the following commands:

netdom computername dc0.untitled.local /add:dc0.thinkarabia.net

netdom computername dc0.untitled.local /makeprimary:dc0.thinkarabia.net

```
Administrator: Command Prompt                                    _ □ X

C:\Users\administrator>netdom computername dc0.untitled.local /add:dc0.thinkarab
ia.net
Successfully added dc0.thinkarabia.net
as an alternate name for the computer.

The command completed successfully.


C:\Users\administrator>
C:\Users\administrator>netdom computername dc0.untitled.local /makeprimary:dc0.t
hinkarabia.net
Successfully made dc0.thinkarabia.net
the primary name for the computer. The computer must be rebooted for this name
change to take effect. Until then this computer may not be able to authenticate
users and other computers, and may not be authenticated by other computers in
the forest. The specified new name was removed from the list of alternate
computer names. The primary computer name will be set to the specified new
name after the reboot.

The command completed successfully.


C:\Users\administrator>
C:\Users\administrator>_
```
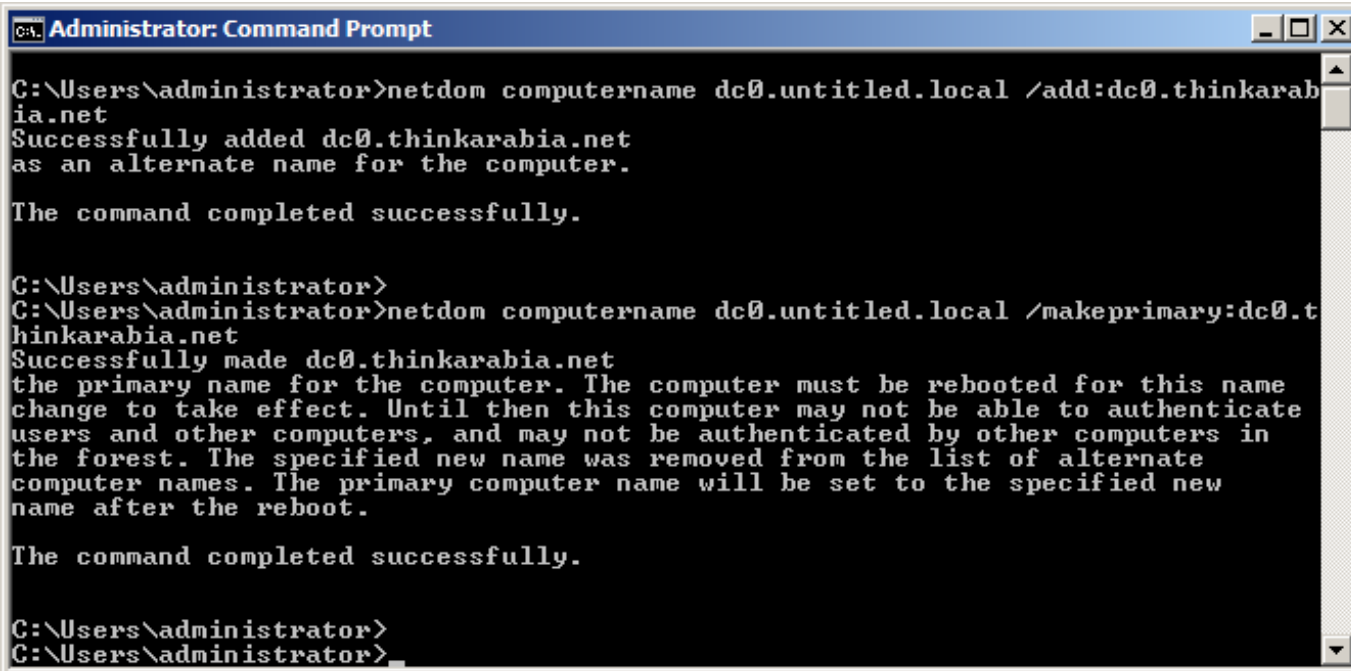
(http://www.trainsignal.com/blog/wp-content/uploads/2012/08/Step-8-Renaming-the-domain-controllers.png)

Restart the domain controller, and repeat for the other domain controller.

Step 9: There is nothing else left to do on the control server except clean up using **rendom /clean**

And now you have a new name for your domain controller. But you need to reboot all your member machines twice for the change to take effect on all of them. It is a good idea to schedule the reboot before performing the procedure so that it happens automatically afterwards.

Note that this same procedure can be used to change the hierarchy of your sub domain in the forest. For example the sub domain it.servies.rj.com can be renamed to it.rj.com to reflect an organization restructuring.

Although this looks like a lot of work, it is nothing to be intimidated by. The procedure flows logically and as long as you understand what you are doing, you will be able to perform it with ease and without any issues.

Ready to test your skills in Active Directory? See how they stack up with this assessment from Smarterer (http://smarterer.com/flock//?utm_source=pluralsight&utm_medium=blog&utm_campaign=bloglinks), the newest addition to the Pluralsight family. Start this Active Directory (http://smarterer.com/tests/active-directory//?utm_source=pluralsight&utm_medium=blog&utm_campaign=bloglinks) test now.

About the Author

Ashraf Al-Dabbas (http://blog.pluralsight.com/author/ashraf-al-dabbas)

Ashraf Al-Dabbas (http://blog.pluralsight.com/author/ashraf-al-dabbas) is vExpert, VCP, 3xMCSE, MCITP, CCNP, ITIL v3 Certified and an MBA holder. He has 10+ years of diverse experience working in a large organizations in systems infrastructure support, leading corporate wide IT initiatives, organizing and conduction projects and social activities. For Ashraf, IT is a passion not a profession. He is self-motivated, persistent and full of positive attitude. Exploring new technologies, learning new knowledge, visiting new places and meeting new people are the things that drive him forward. He likes to write, share ideas and interact with different people. As part of his upbringing in the Jubilee School for gifted students (Amman, Jordan), Ashraf learned to understand, accept then debate all points of view objectively and respectfully.

Discussion

9 comments

Tyler Rosolowski · Kristin School

Great post

Reply · Like ·   1 · November 26, 2013 at 3:41am

Bobby Collins

Very interesting read - and I'm grateful for your taking the time to blog on this. I have one concern; I have read that if you have an Exchange Server within the domain, you cannot rename the domain (or at least, it will seriously screw up the Exchange Server). Have you any experience of this problem, and perhaps can expand on the process to achieve this domain change in this scenario? I am already forming some ideas, but it would be a real help if you have any pointers. Many thanks :-)

Reply · Like ·   1 · March 4, 2014 at 3:56pm

Rekha Joshi · Vijayanagar College, Hospet

Indeed it is a great post. I too have the same question on exchange server.
we even have other servers like sharepoint, lync, will there be any impact on these.
If you are aware please reply back ?

Reply · Like · March 19, 2014 at 3:32am

Maxim Soulshifter Zed Ramaqele · Teyateyaneng

interesting post indeed- i too did domain renaming several time and yes it really screws up exchange very much to an extend that i had to start a new installation of exchange if one has an idea of how to deal with that -----ramaqele@gmail.com

Reply · Like · April 23, 2014 at 1:16am

Amanda DeFalco

Will user profiles have to be migrated on the member workstations?

Reply · Like · April 30, 2014 at 2:24am

David Shackelford · Cal State Fullerton

The documentation that I've seen says that you can't run this with Exchange 2007 or later in the domain, but with Exchange 2003 there is a tool called XDR-Fixup that you can use to fix the Exchange environment.

I've also read that you need to create a new PKI in the Root CA.

Reply · Like · October 23, 2014 at 12:42pm

Chris Smallwood · Atascadero, California

This worked REALLY well. I really appreciate this article. I use this to create a group of VM (instances) in our AWS cloud environment to quickly add new domains for our customers without having to build the DC from the ground up. Nicely done!

Reply · Like · November 13, 2014 at 8:13am

Ron Lee

Hello. Nice, clear steps, but the last one, Step 9, is incorrect in my experience, and I don't see how people followed it without trouble. If you run rendom /clean BEFORE rebooting machines, they will need to be rejoined to the domain. Yikes!

Reply · Like · March 14 at 2:47pm

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