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How to use PowerShell to populate Active Directory with plenty enough users for SharePoint

Tags: [ACTIVE DIRECTORY](#), [WINDOWS SERVER 2008 R2](#), [SHAREPOINT](#)

Tuesday, September 25, 2012 5:24:00 PM

When testing SharePoint or any other software that uses Active Directory or any kind of data storage it is important to test with lot of data, data with variations and real life data. One area that is often forgotten is Active Directory, ok you create 10 or 20 test users, perhaps 50 or 100 users called *Mr. Test Testson32* or similar, but that is not enough. I like to use some real world data for my Active Directories both for testing and for sure it looks more fancy when doing a demo with SharePoint (especially with these new social features in SharePoint 2013). So I'm going to show you some of my scripts I use for this.

Getting me some data

First of all we need users. And not these test users called *Test1*, *Test2*, or you pet names (well I usually throw in my kids once in a while). One fantastic source of data is the [Fake Name Generator](#). This amazing service can get you up to **50.000 randomly generated identities in bulk**. You can choose the name sets, which countries they should come from and what properties you would like. Perfect for getting data that matches your clients! For this post I retrieved 25.000 users from Sweden, US etc and using both European and Chinese names! I chose to use the following properties: Given Name, Surname, Street Address, City, State, Postal Code, Country Abbreviation, E-mail, Username, Telephone, and occupation. All this gets emailed to me as a CSV files in just a couple of minutes.

FAKE NAME GENERATOR™

Importing the data

Now on to the fun stuff with PowerShell. I'm going to take this CSV file import it into a PowerShell object, transform it a bit and then just create Active Directory accounts from them. Let's start with some preparations.

First of all I create a specific OU ("Demo Users") to place all these accounts in, and I also set some password restrictions (well, this is a demo).

```
1 Import-Module ActiveDirectory
2 $dn = (Get-ADDomain).DistinguishedName
3 $forest = (Get-ADDomain).Forest
4
5 Set-ADDefaultDomainPasswordPolicy $forest -ComplexityEnabled $false -MaxPasswordAge "100"
6
7 $ou = Get-ADOrganizationalUnit -Filter 'name -eq "Demo Users"'
8 if($ou -eq $null) {
9     New-ADOrganizationalUnit -Name "Demo Users" -Path $dn
10     $ou = Get-ADOrganizationalUnit -Filter 'name -eq "Demo Users"'
11 }
```

Once this is done it's time to start fiddling with the data. First of all I import the CSV file into a PowerShell object like this (of course you need to replace the file name with yours):

```
1 $data = Import-Csv .\FakeNameGenerator.com_d7a08270.csv
```

Then we'll refine the CSV data into a new PowerShell structure, you can mix and fiddle with this as you like. Notice that my structure uses the parameter names of the [New-ADUser cmdlet](#), so if you want to add cell phone and other attributes to your AD accounts, here's the place to add them.

```
1 $refineddata = $data | select @{Name="Name";Expression={$_.Surname + ", " + $_.GivenName}},
2     @{Name="SamAccountName"; Expression={$_.Username}},
3     @{Name="UserPrincipalName"; Expression={$_.Username + "@" + $forest}},
4     @{Name="GivenName"; Expression={$_.GivenName}},
5     @{Name="Surname"; Expression={$_.Surname}},
6     @{Name="DisplayName"; Expression={$_.Surname + ", " + $_.GivenName}},
7     @{Name="City"; Expression={$_.City}},
8     @{Name="StreetAddress"; Expression={$_.StreetAddress}},
9     @{Name="State"; Expression={$_.State}},
10    @{Name="Country"; Expression={$_.Country}},
11    @{Name="PostalCode"; Expression={$_.ZipCode}},
12    @{Name="EmailAddress"; Expression={$_.EmailAddress}},
13    @{Name="AccountPassword"; Expression={ (ConvertTo-SecureString -Force -AsPlainText)},
14    @{Name="OfficePhone"; Expression={$_.TelephoneNumber}},
15    @{Name="Title"; Expression={$_.Occupation}},
16    @{Name="Enabled"; Expression={$true}},
17    @{Name="PasswordNeverExpires"; Expression={$true}}
```

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As you can see I fix the Name and DisplayName properties and makes sure that the UPN uses the DNS name from the forest etc. I also enable all the users.

And now all that is left is to add them to Active Directory! I don't just add them to the OU created above, instead I actually create one OU for each Country – this makes it more easier to manage and also gives me an opportunity to test accounts in different OU's. So here's the snippet to add the users and create the other OU's:

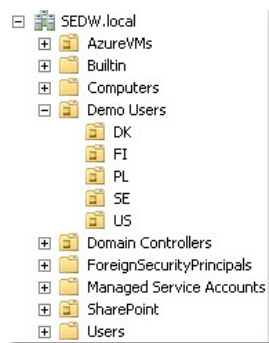
```
1 $refineddata | % {  
2     $subou = Get-ADOrganizationalUnit -Filter "name -eq '$($_.Country)'" -SearchBase $c  
3     if($subou -eq $null) {  
4         New-ADOrganizationalUnit -Name $_.Country -Path $ou.DistinguishedName  
5         $subou = Get-ADOrganizationalUnit -Filter "name -eq '$($_.Country)'" -SearchBase  
6     }  
7     $_ | Select @{Name="Path"; Expression={$subou.DistinguishedName}},* | New-ADUser  
8 }
```

For 25.000 users this will run for a while, but it's worth it!

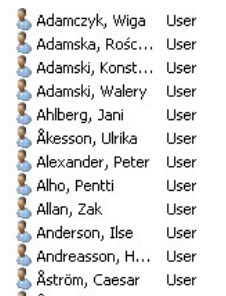
Note that you'll get some errors while running this with lots of users normally. This is due to that some of the usernames are repeated. Of course with some handy PowerShell magic that can be fixed as well...

And here's the result

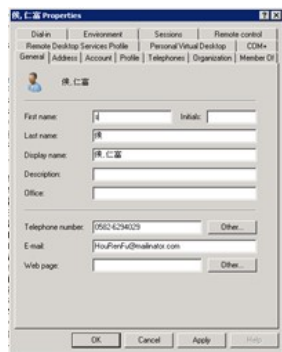
If we now take a look in the Active Directory Users and Computers snap-in it should look something like this:



And then if we drill down into one of the OU's there should be tons of users:



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[↓ 2006 \(157\)](#)

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Admin

[Sign In](#)

Summary

Now you've seen a very simple and fast way to generate lots of demo data for Active Directory. Of course you can modify the snippets above and adapt to your requirements. And you don't need 25.000 users in your development environment remember it will take some time to sync and crawl with SharePoint...

9 Comments

Salvatore Di Fazio said Tuesday, September 25, 2012 6:49:56 PM

Tnx for you script :)

Wictor said Tuesday, September 25, 2012 6:57:53 PM

@Salvatore - you're welcome!

MMThornberg said Tuesday, September 25, 2012 7:50:53 PM

Very nice service tip and accompanying implementation, Wictor! :)

Thuan Soldier said Wednesday, September 26, 2012 12:26:07 PM

What an invaluable tip !!! Many thanks for it.

-T.s

Ovidiu Ghisa said Wednesday, September 26, 2012 9:13:35 PM

Something really great, as always.

Many Thanks

Adis Jugo said Sunday, April 14, 2013 12:37:59 PM

After using this script for 1000 times now (or at least it seems that way), I guess it would be more than proper to thank you for this. And to buy you a drink on the first occasion. :)

Thx, Wictor! :)

Yohan LEFEVRE said Monday, May 6, 2013 3:20:32 PM

Thanks for the tip ! very useful !

Nikolay Sonin said Wednesday, December 4, 2013 8:12:48 PM

Unfortunately I can't run your PS scripts due to the following error on my Win2008R2 machine:

Import-Module : The specified module 'ActiveDirectory' was not loaded because no valid module file was found in any module directory.

Any ideas what it needs?

John Calvert said Sunday, May 11, 2014 10:34:41 PM

Wictor you are awesome, the best! Thanks for a very useful dev-focus task! I used it just now and have my 1000 accounts loaded and ready. Only thing left is to get the my sites provisioned on these test accounts. I know that I can easily find a script to do that, but it would be super cool if you would include a link to that as part of your post. Cool!

Comments have been disabled for this content.



About Wictor...

Wictor Wilén is the Nordic Digital Workplace Lead working at [Avanade](#). Wictor has achieved the Microsoft Certified Architect (MCA) - SharePoint 2010, Microsoft Certified Solutions Master (MCSM) - SharePoint and Microsoft Certified Master (MCM) - SharePoint 2010 certifications. He has also been awarded Microsoft Most Valuable Professional (MVP) for seven consecutive years.

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