NicChanger

Setup and how to use it

Fredrik, T

22.02.2016

Index

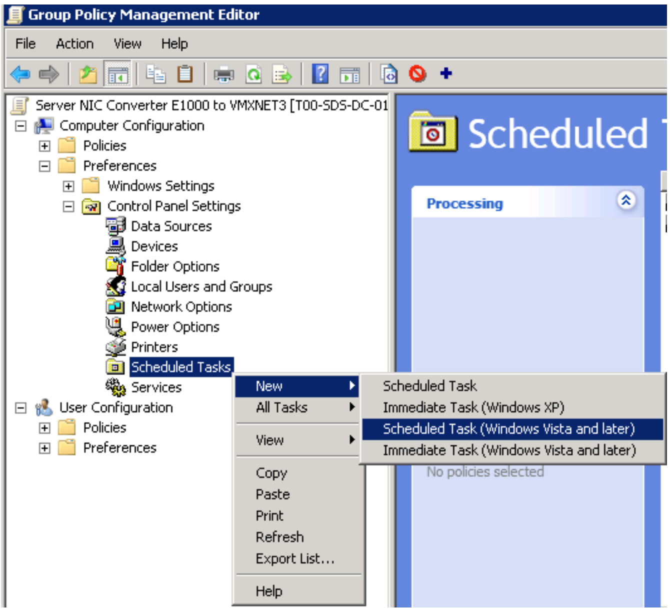
1.0 Introduction

This guide should help you with the following:
- Create the required GPOs with the necessary Scheduled Tasks for the Windows scripts
- How to use the PowerCLI scripts

2.1 Create Scheduled tasks

First, open up gpmc.msc. Create a new GPO and link it to your server OU. Then navigate to Computer Configuration -> Preferences -> Control Panel Settings -> Scheduled Tasks -> New -> Shceduled Task (Windows Vista and later)

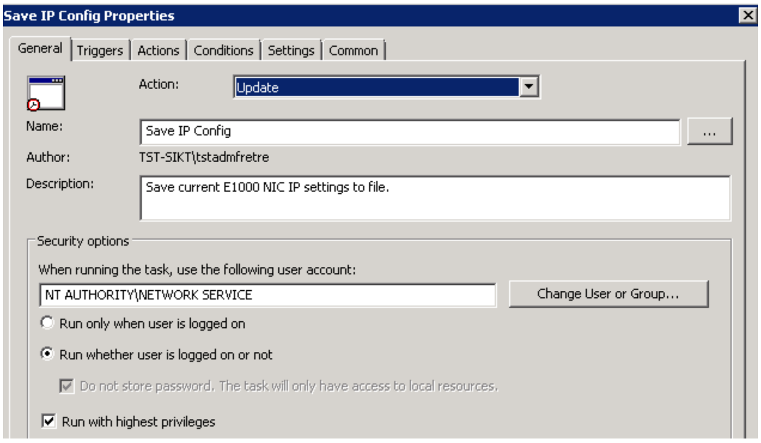
We will now create two tasks. One that runs GetIPConfig.ps1, and another that runs SetIPConfig.ps1.



2.2 **Scheduled Task 1:** Save IP Config (GetIPConfig.ps1)

This script will run once a day. It will check if the current VM is configured with an E1000 adapter, if that's the case it will save the current IP configuration to C:\%MACHINENAME%\IPSettings.csv. If it does not have an E1000 adapter, it will do nothing.

2.2.1 Save IP Config (GetIPConfig.ps1) : General



Action: Update

Name: Save IP Config

Author: TST-SIKT\tstadmfretre

Description: Save current E1000 NIC IP settings to file.

Security options

When running the task, use the following user account:

NT AUTHORITY\NETWORK SERVICE

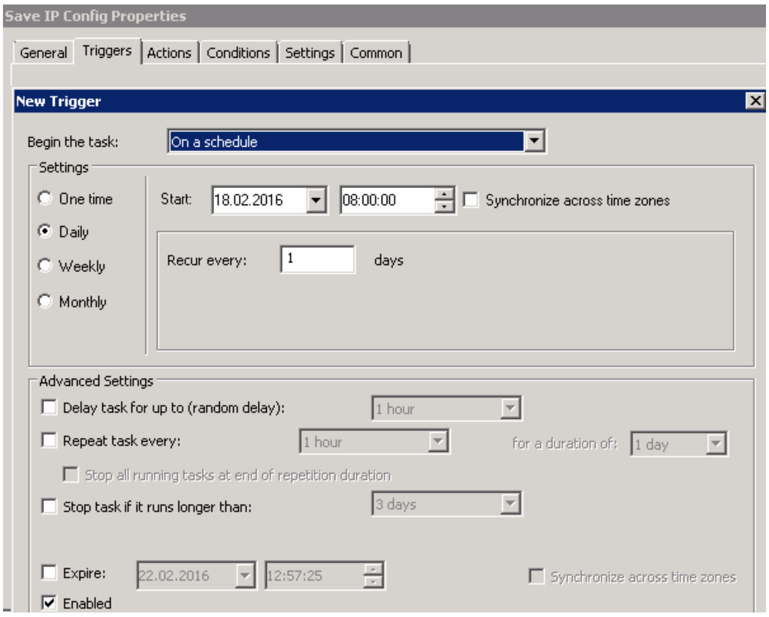
○ Run only when user is logged on

● Run whether user is logged on or not

☑ Do not store password. The task will only have access to local resources.

☑ Run with highest privileges

2.2.2 Save IP Config (GetIPConfig.ps1) : Triggers



Begin the task: On a schedule

Settings

○ One time

● Daily

○ Weekly

○ Monthly

Start: 18.02.2016 08:00:00 □ Synchronize across time zones

Recur every: 1 days

Advanced Settings

□ Delay task for up to (random delay): 1 hour

□ Repeat task every: 1 hour for a duration of: 1 day

□ Stop all running tasks at end of repetition duration

□ Stop task if it runs longer than: 3 days

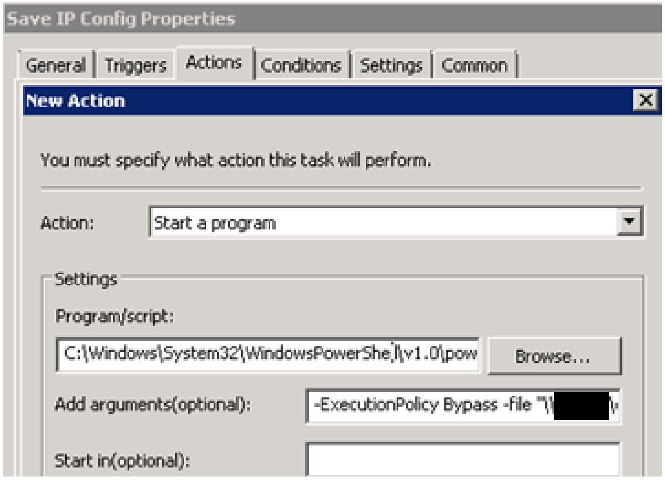
□ Expire: 22.02.2016 12:57:25 □ Synchronize across time zones

☑ Enabled

2.2.3 Save IP Config (GetIPConfig.ps1) : Actions -> New Action

Program/script:
 C:\Windows\System32\WindowsPowerShell\v1.0\powershell.exe

Add arguments:
-ExecutionPolicy Bypass -file “<YourLocation>\NicChanger\Windows\GetIPConfig.ps1"


Save IP Config Properties

New Action

You must specify what action this task will perform.

Action: Start a program

Settings

Program/script: C:\Windows\System32\WindowsPowerShell\v1.0\pow

Add arguments(optional): -ExecutionPolicy Bypass -file "\\[redacted]\

Start in(optional):

Note: You could host this file on a network share. The VM should have network access when it runs this script anyway.

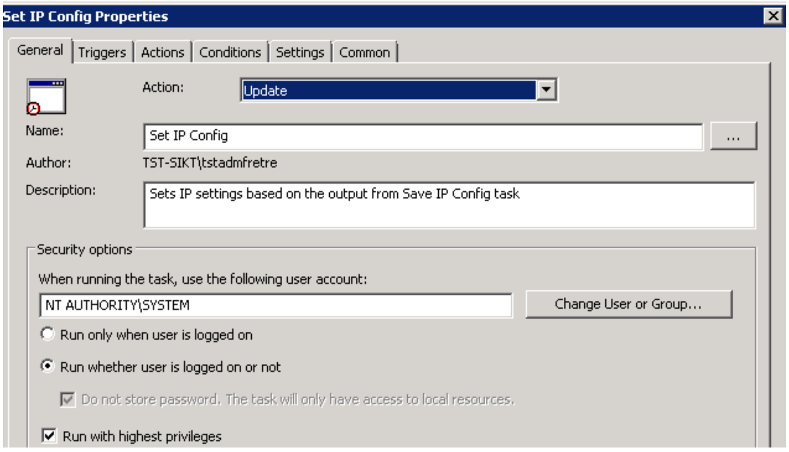
2.3 Scheduled Task 2: Set IP Config (SetIPConfig.ps1)

This script will run on windows startup. It checks if the current network adapter is VMXNET 3, and if the output file from Save IP Config (GetIPConfig.ps1) exists under C:\%MACHINENAME%\IPSettings.csv

If conditions are right (NIC=VMXNET3, IPSettings.csv exists) it will set the IP configuration saved in IPSettings.csv on the newly reconfigured VMXNET3 adapter.

If the file does not exist, then it will do nothing. If the network adapter is E1000 and the file exists, it will output a file named NIC_IS_E1000 in the C:\%MACHINENAME%\ folder and do nothing else.

2.3.1 Set IP Config (SetIPConfig.ps1) : General



Action: Update

Name: Set IP Config

Author: TST-SIKT\tstadmfretre

Description: Sets IP settings based on the output from Save IP Config task

Security options

When running the task, use the following user account:

NT AUTHORITY\SYSTEM

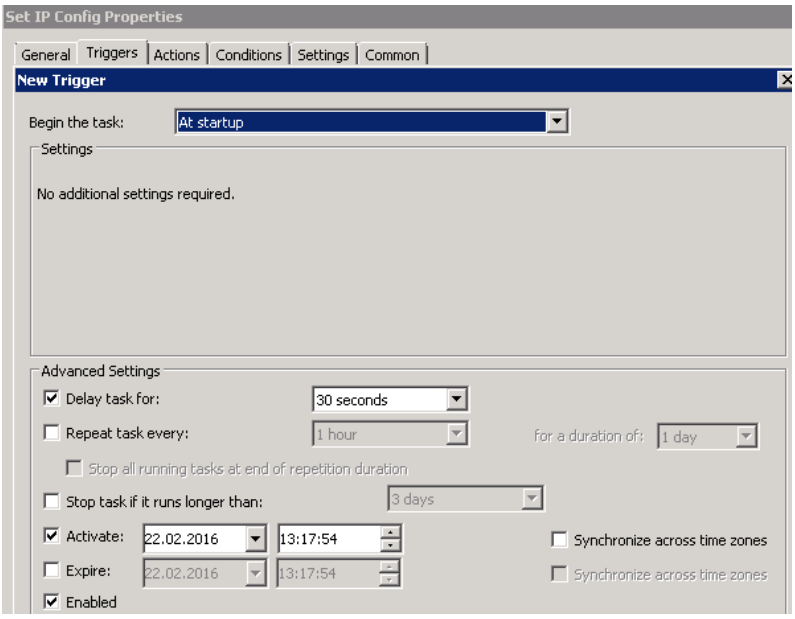
○ Run only when user is logged on

● Run whether user is logged on or not

☑ Do not store password. The task will only have access to local resources.

☑ Run with highest privileges

2.3.2 Set IP Config (SetIPConfig.ps1) : Triggers



Begin the task: At startup

Settings

No additional settings required.

Advanced Settings

☑ Delay task for: 30 seconds

☐ Repeat task every: 1 hour for a duration of: 1 day

☐ Stop all running tasks at end of repetition duration

☐ Stop task if it runs longer than: 3 days

☑ Activate: 22.02.2016 13:17:54 ☐ Synchronize across time zones

☐ Expire: 22.02.2016 13:17:54 ☐ Synchronize across time zones

☑ Enabled

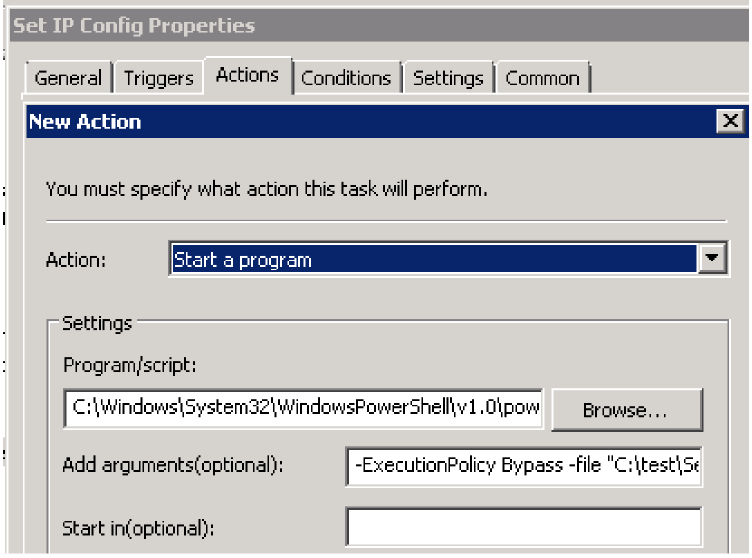
2.3.3 Set IP Config (SetIPConfig.ps1) : Actions

Program/script:

C:\Windows\System32\WindowsPowerShell\v1.0\powershell.exe

Add arguments:

-ExecutionPolicy Bypass -file “C:\Scripts\NicChanger\Windows\SetIPConfig.ps1"



Set IP Config Properties

New Action

You must specify what action this task will perform.

Action: Start a program

Settings

Program/script: C:\Windows\System32\WindowsPowerShell\v1.0\pow

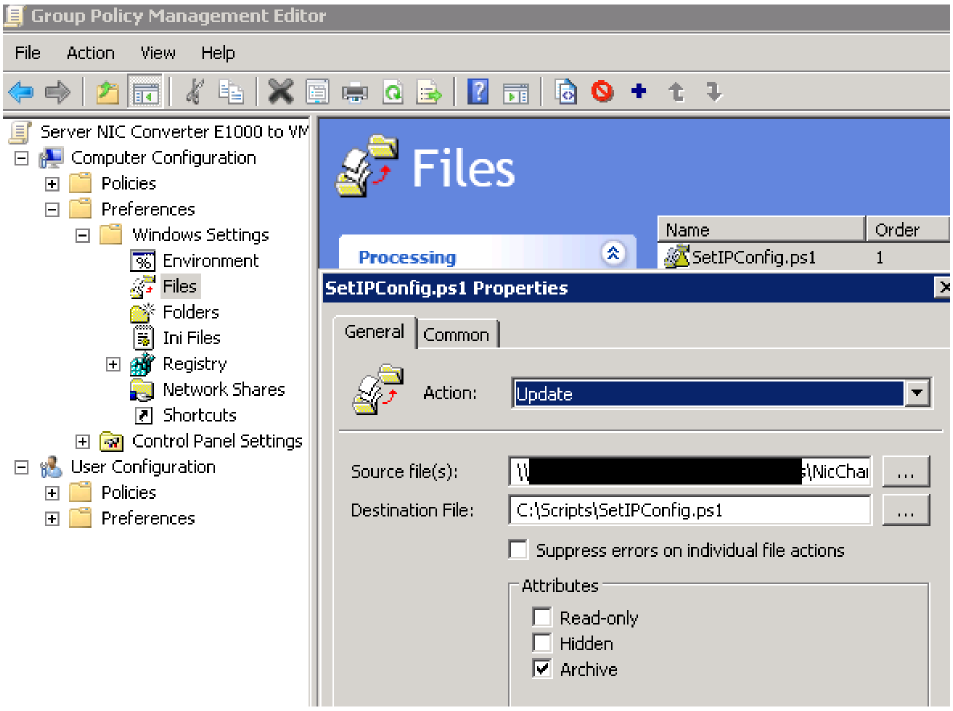
Add arguments(optional): -ExecutionPolicy Bypass -file "C:\test\Se

Start in(optional):

Note: You have to save this file locally, the VM will not have network access to any file shares when it runs this task after the NIC change and reboots! Make a GPO that copies SetIPConfig.ps1 to all the servers locally.

2.4 Create a Copy file GPO

Handy if you don’t want to copy the SetIPConfig.ps1 script manually to every computer that you want to change the network adapter on. Add the source file on a network share, then set the destination folder to c:\Scripts\SetIPConfig.ps1. The GPO will create the Script folder if it doesn’t already exist.



Name	Order
SetIPConfig.ps1	1

Action: Update

Source file(s): \\[redacted]\NicChai

Destination File: C:\Scripts\SetIPConfig.ps1

□ Suppress errors on individual file actions

Attributes

□ Read-only

□ Hidden

☑ Archive

2.5 Using the powerCLI scripts

Connect to your vcenter by starting PowerCLI, then using the command Connect-VIServer <YourVcenterAddress>

2.5.1 Get-VMs.ps1

Run Get-VMs.ps1 to dump all the current VMs into a file. Edit the script to output it where you want it. Just remember, if you change the destination file you also need to change the source file in Get-OSandPowerstate.ps1

Default: $FilePath = "c:\tools\Network_Interface.csv"

2.5.2 Get-OSandPowerstate.ps1

In this script you can add rules to only select servers you want to change the network adapters on. It will output compatible VMs to a file. The rule setting is to only select Windows Server 2008 and up.

Default:
Source: $FilePath = "c:\tools\Network_Interface.csv"
Destination: $FilePathOutput = "c:\tools\Network_Interface_Sorted.csv"

2.5.3 Change-NIC.ps1

Warning: Only run this on VMs that has run the scheduled task GetIPConfig.ps1

This script will do the network adapter commit to vCenter, and change all the adapters on the VMs it finds inside "c:\tools\Network_Interface_Sorted.csv"

You can edit the "c:\tools\Network_Interface_Sorted.csv" file before running the Change-NIC.ps1 script. You can remove the VMs you don't want to do the change on. You could also remove all but a handful VMs to do tests.

Note: The script will not do anything to VMs which is in a "poweredOff" state.

The reason for this is because **Save IP Config (GetIPConfig.ps1)** is only run when the VM(windows) is powered on. So if a VM is not currently powered on we do not know if the Windows scripts have done their job.