AUTOMATING SOFTWARE INSTALLATION USING POWERSHELL SCRIPTING

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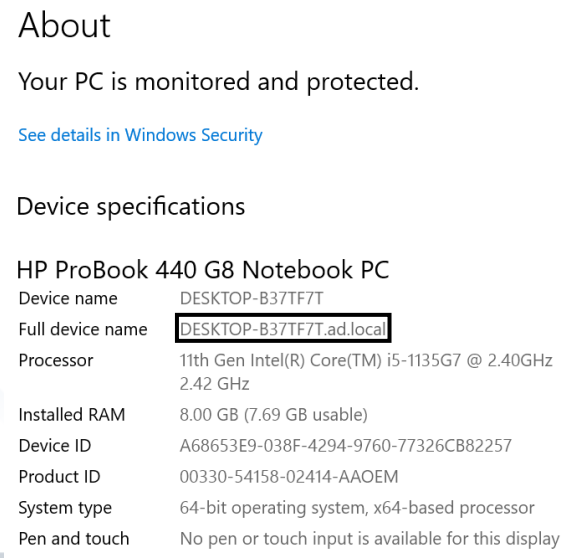
Introduction

Whenever the IT Operation Team setup a new PC for new hires or tech refresh purpose, it takes up quite some time to finish the setup process even for just one single PC, but what if there are 10, 20 PCs? The amount of time it takes surely time consuming. However, if we could just automate the entire, if not part of the process, we could save up huge amount of time and effort. PowerShell scripting is the answer to our problem. This technical report acts as a user manual on how to use PowerShell scripting to silent install software remotely or locally onto computers with little human interaction. We could save up huge amount of time and effort by doing so. Note that the usage of this script doesn't mean that we could just leave the script running and engaging in other task, a little human supervision is needed as user input and ensuring stable network connection is required during script execution. I have included some errors I encountered during the creation and testing of the script and how I troubleshoot those issues so you could refer whenever you met those issues to save the trouble googling it. I have also attached the PowerShell script in the appendix section in case someone accidentally deleted the original copy in file share.

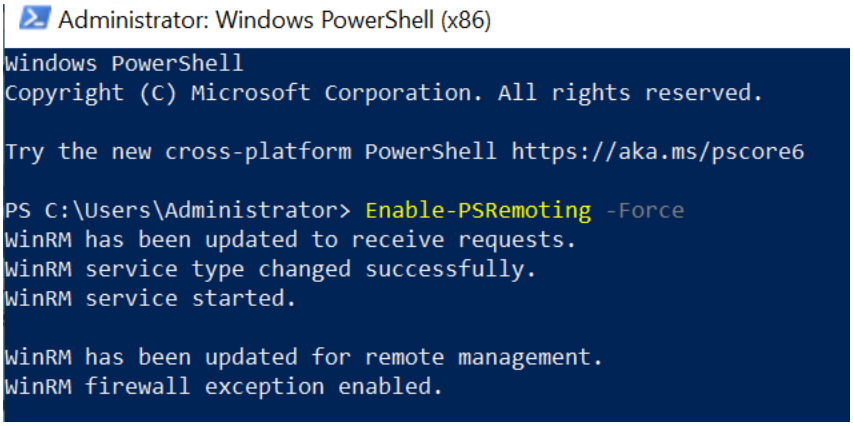
Prerequisites for Remote Installation

1. Make sure the remote computer has joined domain. Based on previous experience, pinging it before joining domain results in destination host unreachable. However, the host PC will receive replies if ping again after joining domain. Go to Settings -> System -> About to check if it had joined domain or not, if it is, it will displayed in the format <hostname>.ad.local under full device name.



2. Next, we have to make sure we could connect to the remote computer. Ping the hostname of the remote computer. Replies from remote computer are expected, or else you will encounter errors during script execution. It is important to have stable network connectivity as well.

3. Run Windows PowerShell or Windows PowerShell ISE as administrator on the remote computer, run the following command. The command is used to enable PowerShell remoting on the remote computer. It allows PowerShell commands to be executed on remote machines where this command is executed.

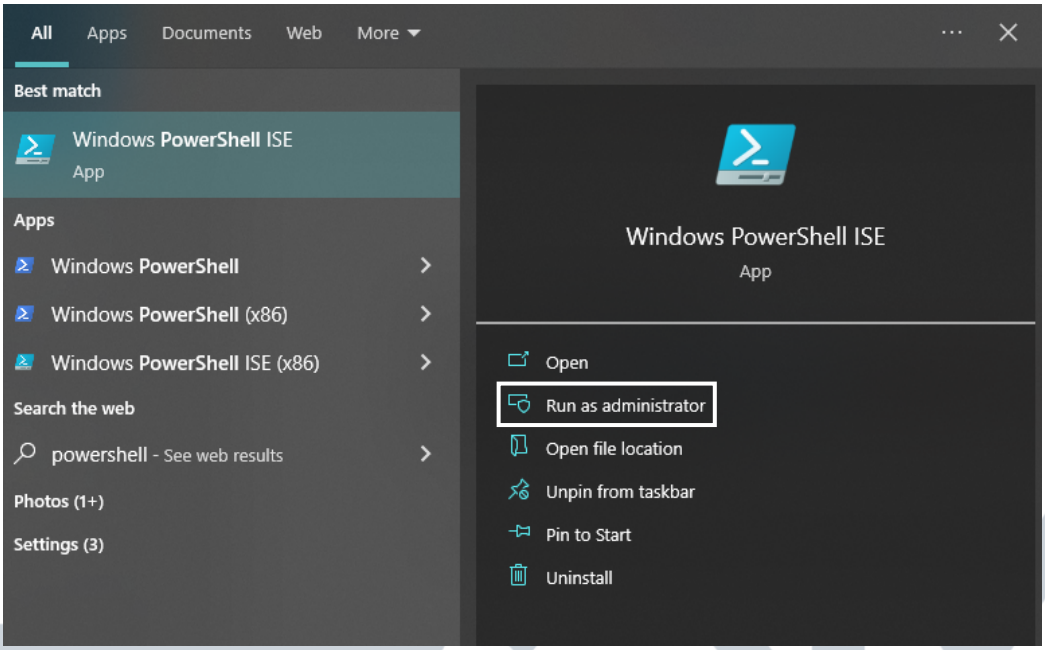


How to use the script?

Remote Installation

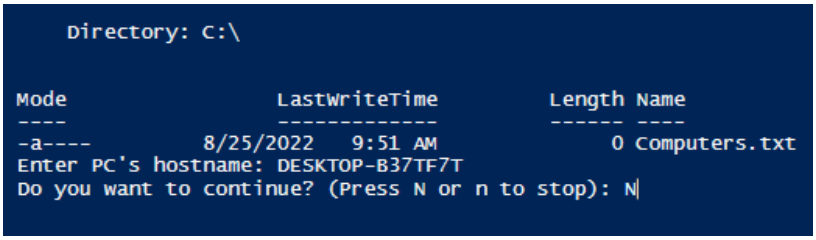
Although it requires some setup in order to use this script, this script requires to execute in your computer only once.

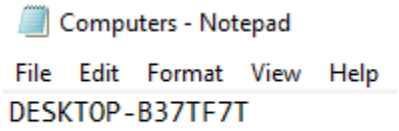
1. On your computer, open Windows PowerShell or Windows PowerShell ISE as administrator, type the following path and press Enter to execute the script, \\sw\swdepot$\PowerShell\Remote.ps1.




```
PS C:\WINDOWS\system32> & '\\sw\swdepot$\Powershell\Remote.ps1'
```

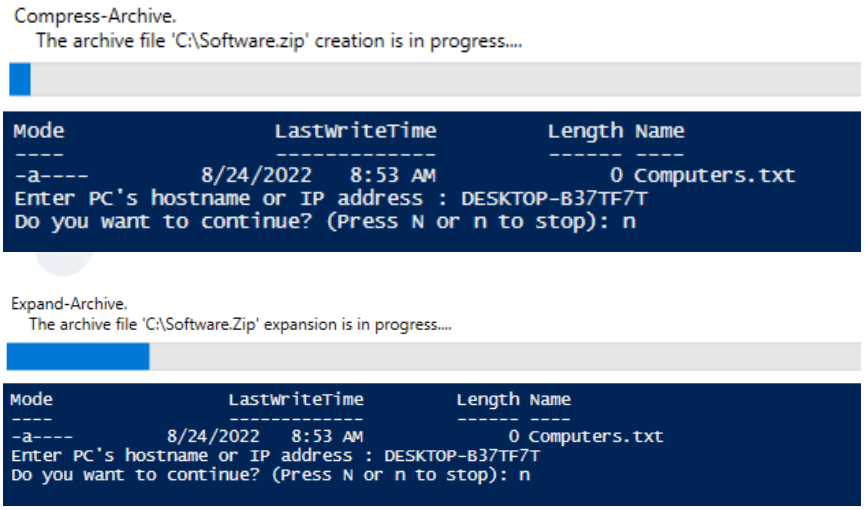
2. At the beginning of the script execution, a text file name Computers.txt will be created in root directory, enter PC's hostname, then press Enter, the hostname will be stored in Computers.txt, if you want to stop the input, press 'N' or 'n' to stop the input, or else press any other key (Enter key would work also) to continue the input. The content of the text file can be viewed during script execution.

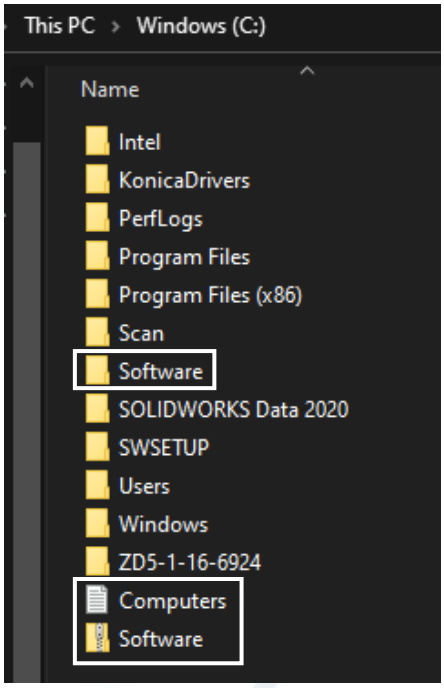




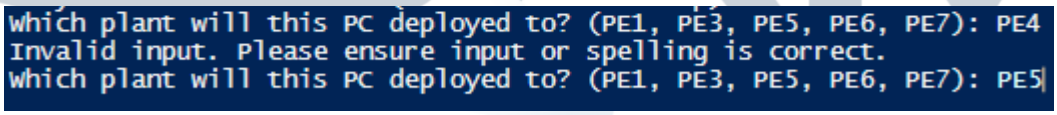
**Make sure to enter hostname instead of IP address, this is because complicating configurations are required in order to use IP addresses. Use hostnames to make things simpler.

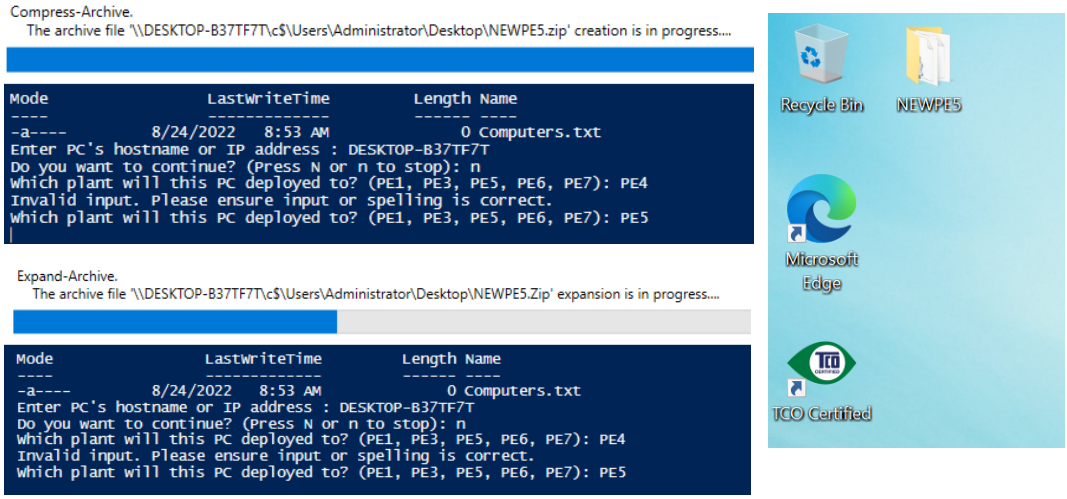
3. The Software folder from swdepot$ will be compressed to a zip file and transfer to the root directory of your PC, and will unzipped on root directory as well. The Software folder contains the installer file for the applications.



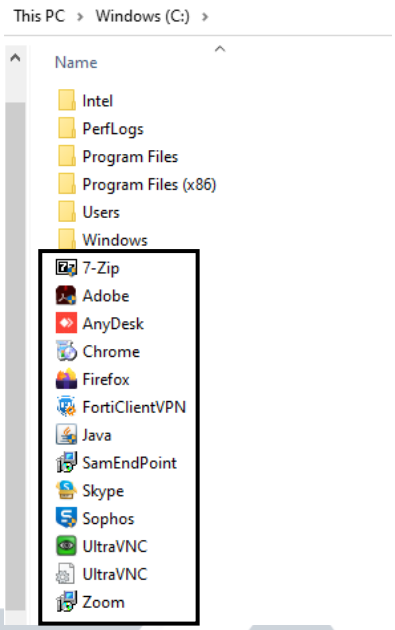


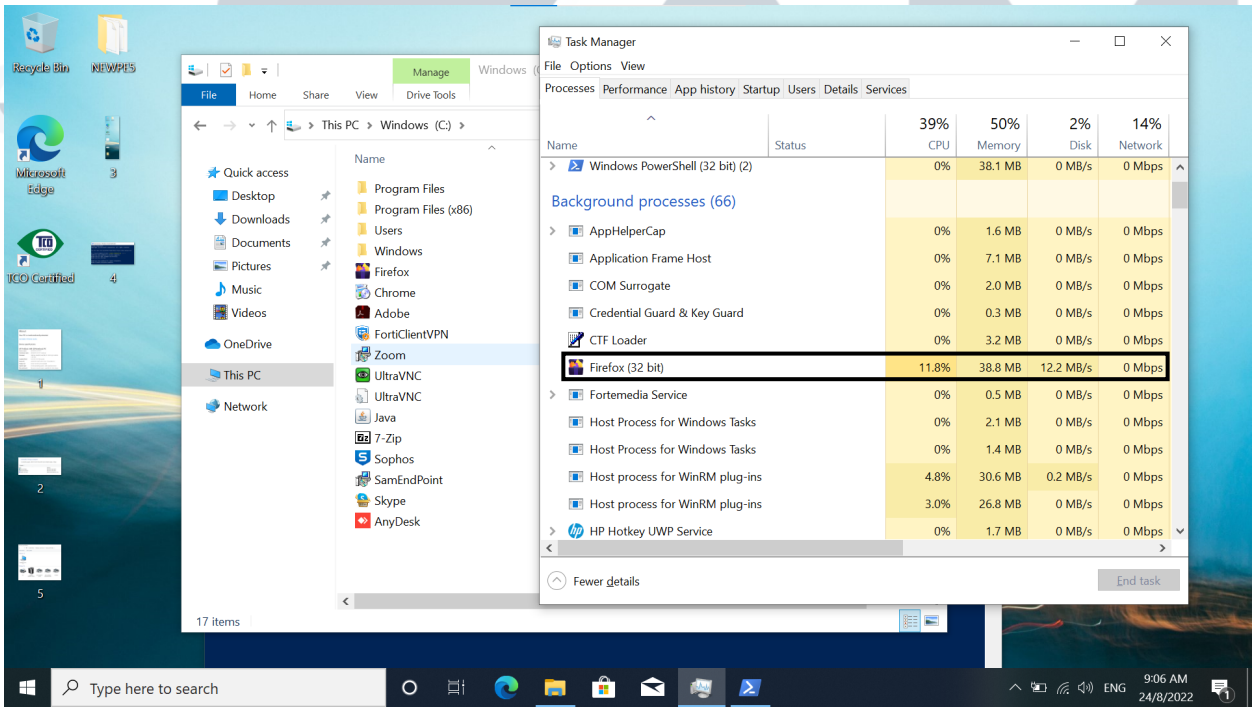
4. You will be asked for input which plant will this PC be deployed, and the respective Konica printer driver folder will be compress, transfer to the local administrator's desktop of the remote computer, unzipped on the same location, and execute the installer to install the printer driver. The zip file will be remove from remote computer's desktop after installation. You will be prompt for input again if you provide the wrong input.



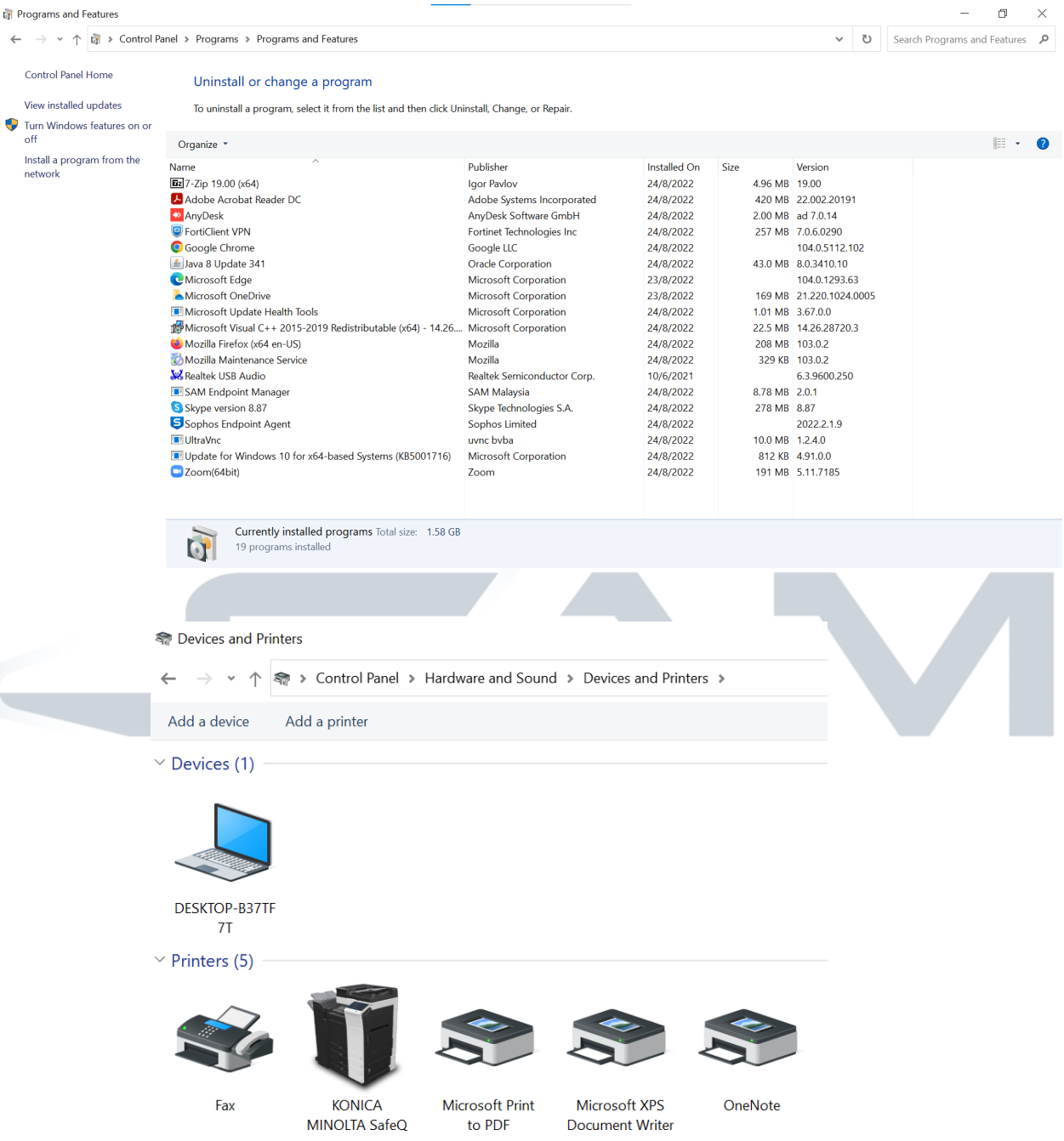


5. Installers from the Software folder will then be copied to the root directory of the remote computer and execute to install software silently. Silent install means there will be no pop-up window unlike usual installation process. There will be no PC restart as well to ensure smooth script execution. You can monitor the installer's execution process in the Task Manager.





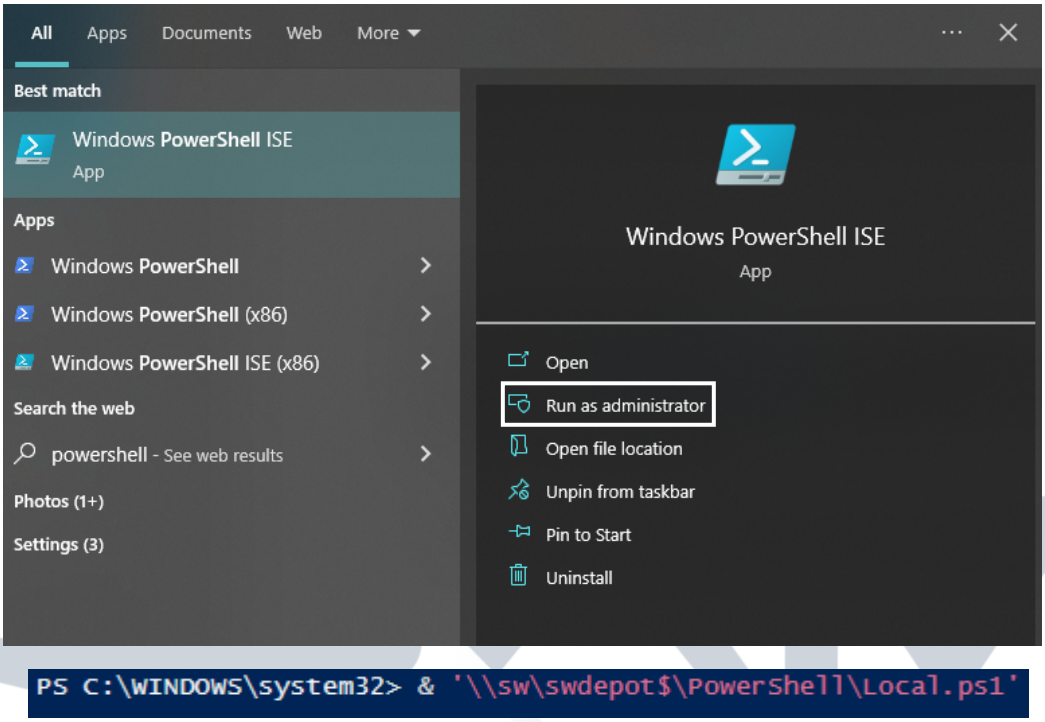
6. You can verify whether all 13 software have been successfully installed in the control panel.



7. If there is multiple input in Computers.txt, the process from step 4 to 6 will be repeated on a different remote computer, or else the Computers.txt, Software.zip and Software folder will be removed from the root directory of your PC at the end the script.

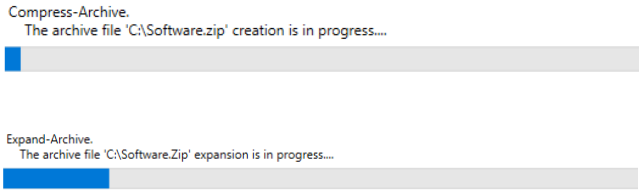
Local Installation
This script requires no setup at all unlike Remote.ps1, however because the script is executed locally, some effort is required to execute the script onto each computer individually.

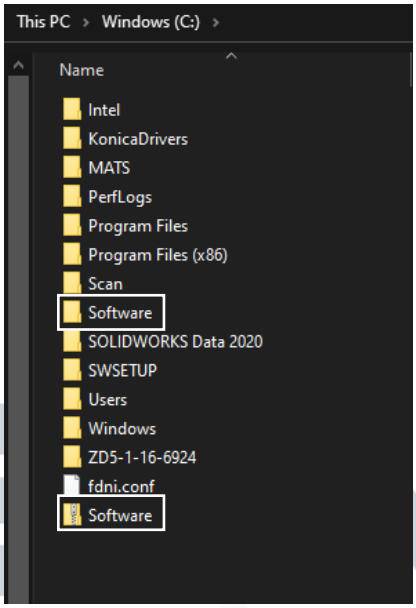
1. On the computer you would want to install the software, open Windows PowerShell, or Windows PowerShell ISE as administrator, type the following path \\sw\swdepot$\PowerShell\Local.ps1 and press Enter to execute the script.



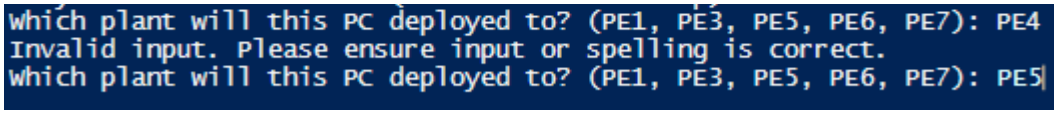

```
PS C:\WINDOWS\system32> & '\\sw\swdepot$\PowerShell\Local.ps1'
```

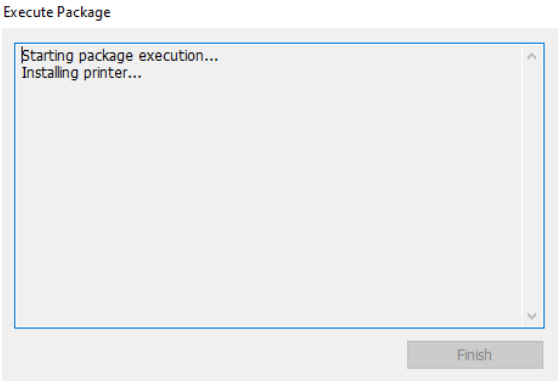
2. The Software folder from swdepot$ will be compressed to a zip file and transfer to the root directory of the PC, and will unzipped on root directory as well. The Software folder contains the installer file for the applications.



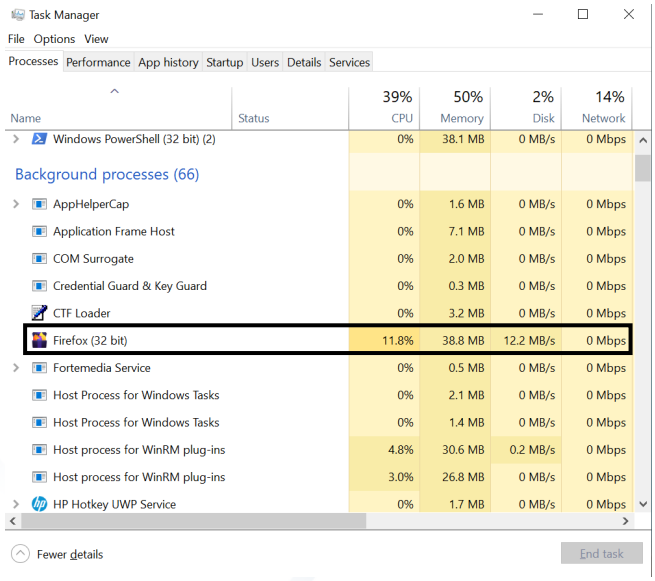


3. You will be asked for input which plant will this PC be deployed, and the respective Konica printer driver folder will be compress, transfer to the local administrator's desktop of the computer, and unzipped on the same location, and execute the installer to install the printer driver from the printer driver folder. The zip file will be remove from the computer's desktop after installation. You will be prompt for input again if you provide the wrong input. The printer driver installer wasn't able to install silently for unknown reasons, but that doesn't affect the script execution.

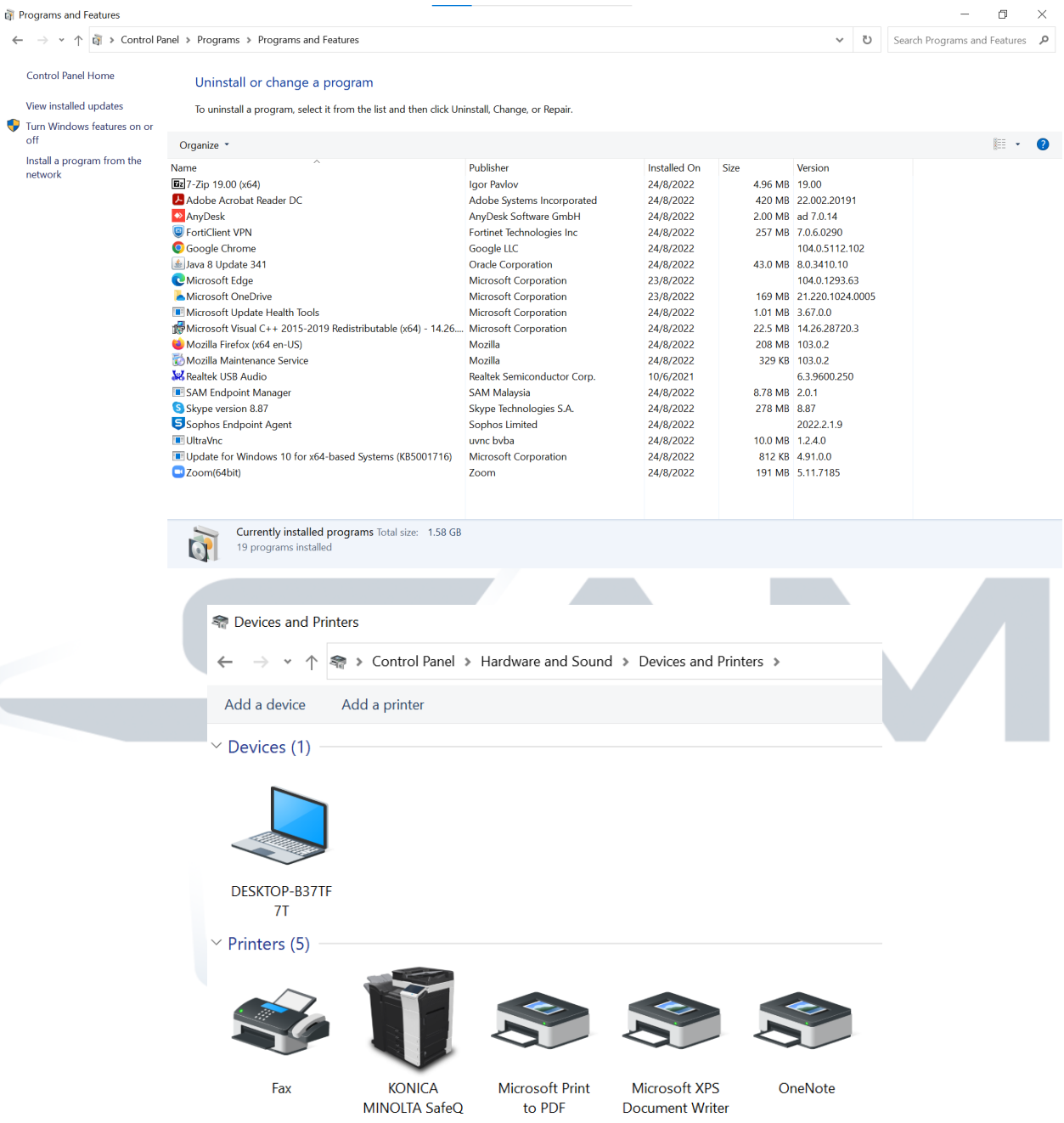




4. Installers from the Software folder will execute to install software silently. Silent install means there will be no pop-up window unlike usual installation process. There will be no PC restart as well to ensure smooth script execution. You can monitor the installer's execution process in the Task Manager.



5. You can verify whether all 13 software have been successfully installed in the control panel.



6. Software.zip and Software folder will be removed from the root directory of the PC at the end the script.

**The usage of each script is based on personal preference but take note that there are possible situations where the script would end halfway or some software didn't install at all (in my case is Java), make proper decision whether you want to rerun the script again (just comment out part of the script that run successfully to avoid running the same thing twice) or installed the remaining uninstalled software manually.

Troubleshooting 101

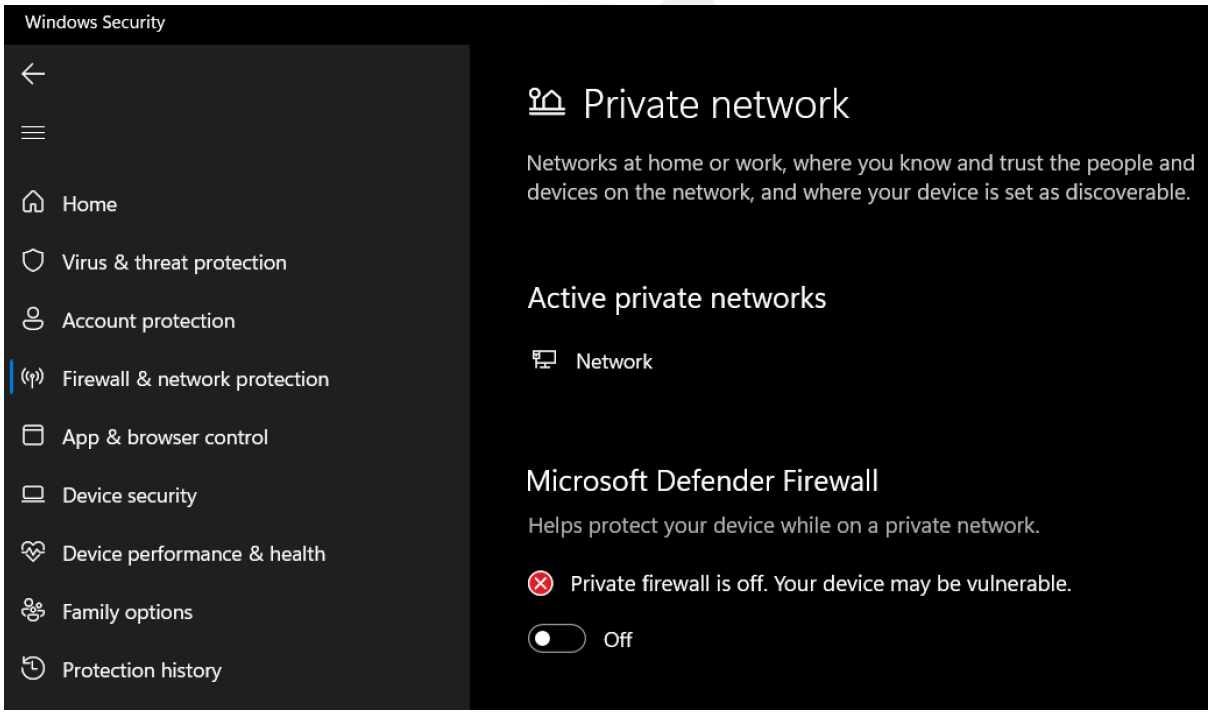
Issue 1:
Unable to ping remote computer:

```
PS C:\Users\Administrator> ping SM0717LT050

Pinging SM0717LT050.ad.local [172.16.31.55] with 32 bytes of data:
Reply from 172.16.31.130: Destination host unreachable.
Reply from 172.16.31.130: Destination host unreachable.
Reply from 172.16.31.130: Destination host unreachable.
Reply from 172.16.31.130: Destination host unreachable.

Ping statistics for 172.16.31.55:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
```

Solution:
Disconnect the remote computer from SAM-WiFi or any other WiFi connection and connect to a network port using an Ethernet cable. Type ipconfig /flushdns and ping the computer again.

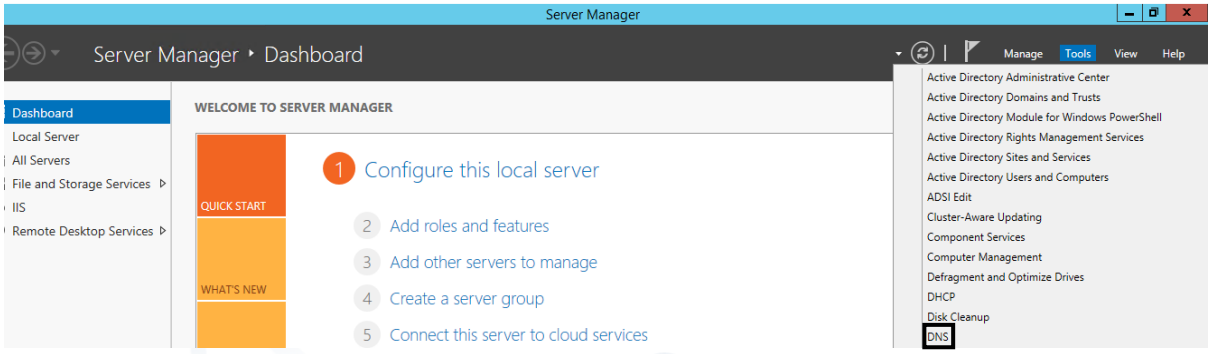
```
PS C:\Users\Administrator> ipconfig /flushdns

Windows IP Configuration

Successfully flushed the DNS Resolver Cache.

PS C:\Users\Administrator> ping SM0717LT050

Pinging SM0717LT050.ad.local [172.16.32.84] with 32 bytes of data:
Reply from 172.16.32.84: bytes=32 time=11ms TTL=127
Reply from 172.16.32.84: bytes=32 time=13ms TTL=127
Reply from 172.16.32.84: bytes=32 time=7ms TTL=127
Reply from 172.16.32.84: bytes=32 time=2ms TTL=127

Ping statistics for 172.16.32.84:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 2ms, Maximum = 13ms, Average = 8ms
```

Solution 2:
On the remote computer, go to Windows Settings -> Windows Security -> Firewall & network protection, turn off Microsoft Defender Firewall for private networks, remember to turn it back on afterwards.

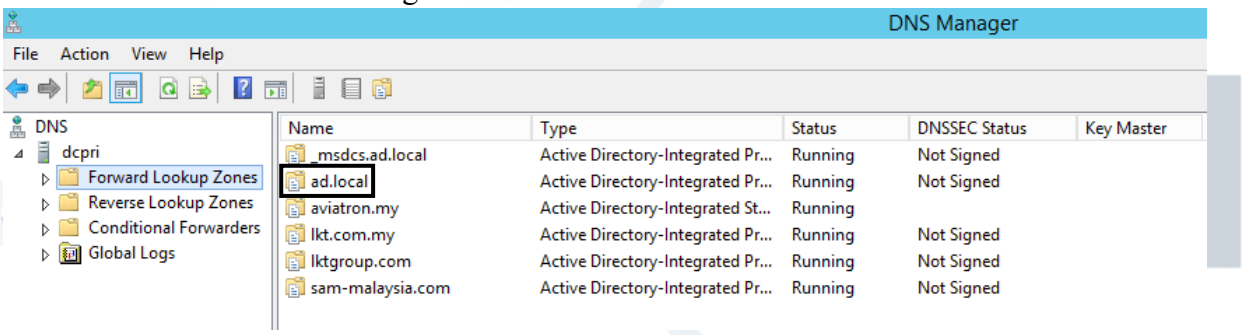


Solution 3:
Type ipconfig on the remote computer, look for its IP address, if it shows different IP from when pinging the hostname (IP address will be displayed next to the hostname when pinging) even though you have type ipconfig /flushdns, it means that the DNS server hasn't update the computer's record (A).

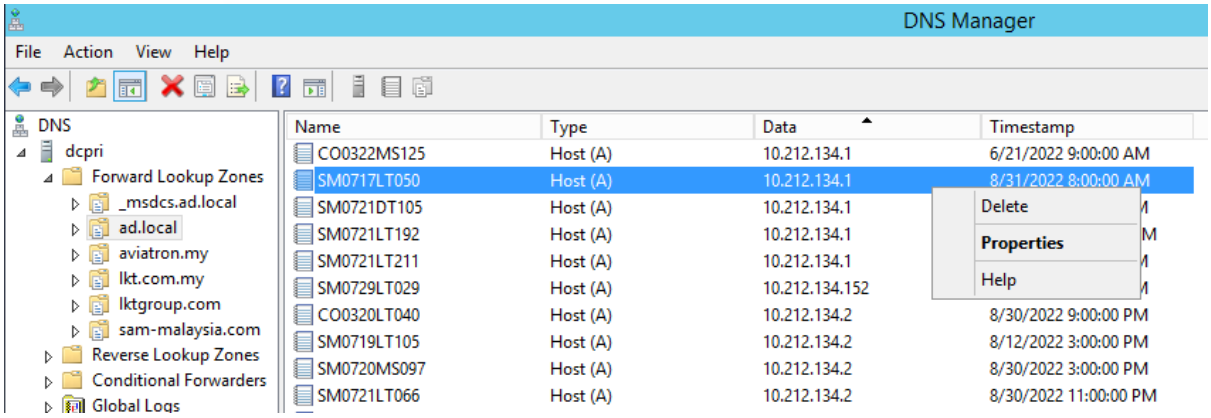
a. Remote connect to terminal2-svr, under the server dashboard, go to Tools -> DNS



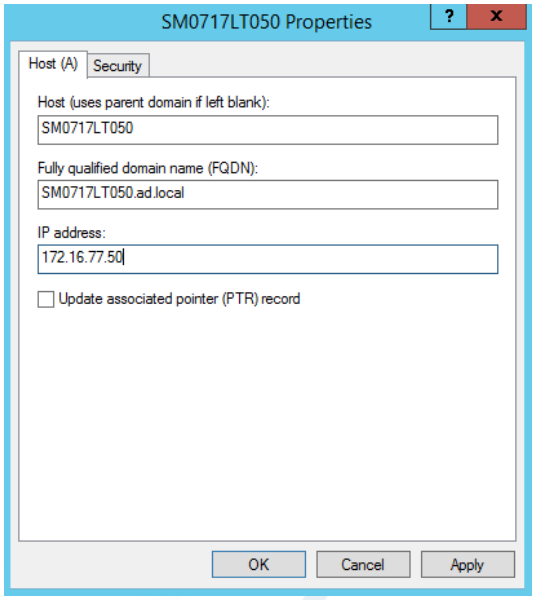
b. Click ad.local in DNS Manager.



c. Find the hostname of the remote computer, right click, and select Properties.



d. Replace the old IP address with the new IP address as shown in ipconfig in the remote computer, the click Apply.



e. Disconnect from the server, on your computer, type ipconfig /flushdns and ping the remote computer again.

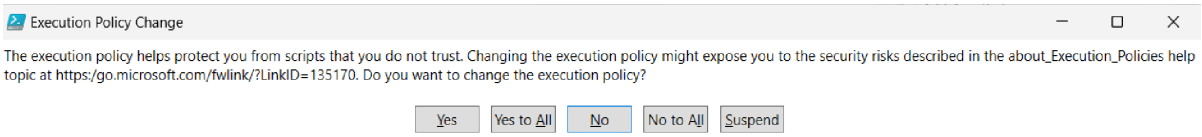
Issue 2:

```
PS C:\Windows\system32> C:\Users\alvin\Desktop\Script.ps1
C:\Users\alvin\Desktop\Script.ps1 : File C:\Users\alvin\Desktop\Script.ps1 cannot be loaded
because running scripts is disabled on this system. For more information, see
about_Execution_Policies at https:/go.microsoft.com/fwlink/?LinkID=135170.
At line:1 char:1
+ C:\Users\alvin\Desktop\Script.ps1
+ ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
    + CategoryInfo          : SecurityError: (:) [], PSSecurityException
    + FullyQualifiedErrorId : UnauthorizedAccess
```

Solution:
Type the following syntax:

```
PS C:\Windows\system32> Set-ExecutionPolicy UnRestricted
```

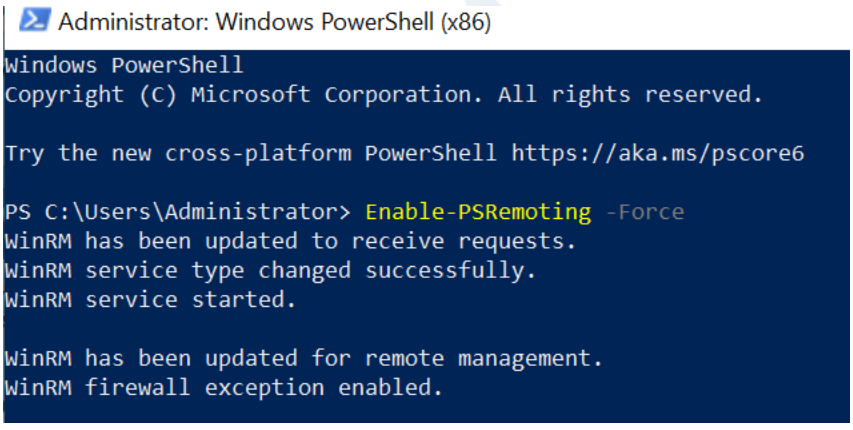
Click Yes to All for the following pop-up window:



Issue 3:

```
[DESKTOP-B37TF7T] Connecting to remote server DESKTOP-B37TF7T failed with the following error message : The client cannot connect to the destination specified in the
request. Verify that the service on the destination is running and is accepting requests. Consult the logs and documentation for the WS-Management service running on the
destination, most commonly IIS or WinRM. If the destination is the WinRM service, run the following command on the destination to analyze and configure the WinRM service:
"winrm quickconfig". For more information, see the about_Remote_Troubleshooting Help topic.
    + CategoryInfo          : OpenError: (DESKTOP-B37TF7T:String) [], PSRemotingTransportException
    + FullyQualifiedErrorId : CannotConnect,PSSessionStateBroken
```

Solution:
Run Windows PowerShell or Windows PowerShell ISE as administrator on the remote computer, run the following command.

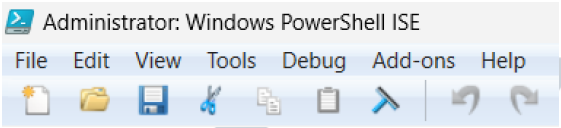


Issue 4:

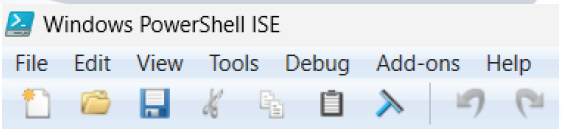
```
PS C:\Windows\system32> Enable-PSRemoting -Force
Enable-PSRemoting : Access is denied. To run this cmdlet, start Windows PowerShell with the "Run as administrator"
option.
At line:1 char:1
+ Enable-PSRemoting -Force
+ ~~~~~~~~~~~~~~~~~~~~~~~~
    + CategoryInfo          : NotSpecified: (:) [Enable-PSRemoting], InvalidOperationException
    + FullyQualifiedErrorId : System.InvalidOperationException,Microsoft.PowerShell.Commands.EnablePSRemotingCommand


PS C:\Windows\system32> Set-ExecutionPolicy UnRestricted
Set-ExecutionPolicy : Access to the registry key
'HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\PowerShell\1\ShellIds\Microsoft.PowerShell' is denied. To change the
execution policy for the default (LocalMachine) scope, start Windows PowerShell with the "Run as administrator"
option. To change the execution policy for the current user, run "Set-ExecutionPolicy -Scope CurrentUser".
At line:1 char:1
+ Set-ExecutionPolicy UnRestricted
+ ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
    + CategoryInfo          : PermissionDenied: (:) [Set-ExecutionPolicy], UnauthorizedAccessException
    + FullyQualifiedErrorId : System.UnauthorizedAccessException,Microsoft.PowerShell.Commands.SetExecutionPolicyCom
   mand
```

Solution:
There are certain commands that could be used only by administrators. Therefore, run PowerShell or PowerShell ISE as administrator to use those commands. If run on non-administrator, you will be prompted to enter administrator username and password.

Running PowerShell ISE as administrator will displayed the following on the top:



Whereas running as non-administrator will look like this:



Issue 5:

```
Compress-Archive : The archive file \\DESKTOP-B37TF7T\c$\Users\Administrator\Desktop\NEWPE5.zip already exists. Use the -Update parameter to update the existing archive
file or use the -Force parameter to overwrite the existing archive file.
At C:\Users\alvin.lee.gw\Desktop\Script.ps1:62 char:13
+            Compress-Archive -Path $pe5File -DestinationPath "\\$comp ...
+            ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
    + CategoryInfo          : InvalidArgument: (\\DESKTOP-B37TF...ktop\NEWPE5.zip:String) [Compress-Archive], IOException
    + FullyQualifiedErrorId : ArchiveFileExists,Compress-Archive

ExpandArchiveHelper : Failed to create file '\\DESKTOP-B37TF7T\c$\Users\Administrator\Desktop\NEWPE5\AutoRun.inf' while expanding the archive file
'\\DESKTOP-B37TF7T\c$\Users\Administrator\Desktop\NEWPE5.zip' contents as the file '\\DESKTOP-B37TF7T\c$\Users\Administrator\Desktop\NEWPE5\AutoRun.inf' already exists.
Use the -Force parameter if you want to overwrite the existing directory '\\DESKTOP-B37TF7T\c$\Users\Administrator\Desktop\NEWPE5\AutoRun.inf' contents when expanding the
archive file.
At C:\WINDOWS\system32\WindowsPowerShell\v1.0\Modules\Microsoft.PowerShell.Archive\Microsoft.PowerShell.Archive.psm1:397 char:17
+ ...             ExpandArchiveHelper $resolvedSourcePaths $resolvedDestina ...
+                 ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
    + CategoryInfo          : InvalidOperation: (\\DESKTOP-B37TF...PE5\AutoRun.inf:String) [Write-Error], IOException
```

Solution:
Ignore the error. The error message act as a reminder informing that the file or folder already exists. It won't have affect anything or the script execution.

Reference

1. https://4sysops.com/wiki/enable-powershell-remoting/
2. https://www.sharepointdiary.com/2014/03/fix-for-powershell-script-cannot-be-loaded-because-running-scripts-is-disabled-on-this-system.html
3. https://www.youtube.com/watch?v=9j8oMLuOl7A
4. https://powershellexplained.com/2017-04-22-Powershell-installing-remote-software/
5. https://www.youtube.com/watch?v=M0qX46M3mnE
6. https://support.mozilla.org/en-US/kb/deploy-firefox-msi-installers#w_msi-installers
7. https://support.zoom.us/hc/en-us/articles/201362163-Mass-deploying-with-preconfigured-settings-for-Windows
8. https://uvnc.com/docs/uvnc-server/48-uvnc-server-installation.html
9. https://community.spiceworks.com/topic/2250289-ultravnc-install-options
10. https://adamtheautomator.com/ultravnc-silent-install/
11. https://docs.fortinet.com/document/forticlient/6.0.1/administration-guide/137934/installing-forticlient-using-the-cli
12. https://community.spiceworks.com/topic/2279089-script-to-enable-non-admin-user-to-install-anydesk-fails-with-access-is-denied
13. https://support.anydesk.com/knowledge/use-cases-for-the-command-line-interface
14. https://www.tutorialspoint.com/powershell/if_else_statement_in_powershell.htm
15. https://www.business.com/articles/powershell-for-loop/
16. https://docs.microsoft.com/en-us/powershell/module/microsoft.powershell.core/about/about_break?view=powershell-7.2
17. https://devblogs.microsoft.com/scripting/powershell-looping-understanding-and-using-do-while/
18. https://www.tutorialspoint.com/powershell/powershell_operators.htm
19. https://blog.netwrix.com/2018/11/06/using-powershell-to-create-zip-archives-and-unzip-files/
20. https://pureinfotech.com/install-windows-10-update-powershell/
21. https://www.java.com/en/download/help/silent_install.html
22. https://silentinstallhq.com/skype-for-desktop-silent-install-how-to-guide/
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Appendix

Remote.ps1

```
#Create a text file named Computers at root directory
New-Item C:\Computers.txt

#The variable $continue will be null upon declaration, the variable acts as an controller for
the while loop
$continue
#The while loop is used for continuous input if there is more than one PC to setup
while($continue -ne 'N' -OR $continue -ne 'N')
{
   #Variable $pc is used to stores the PC's hostname
   $pc = Read-Host "Enter PC's hostname"
   #Value of $pc is then added to Computers.txt
   Add-Content C:\Computers.txt $pc
    <#Variable $continue will store input from user, if user enter ‘N’ or ‘n’, the
    loop will break because it does not meet the condition to continue the loop#>
    $continue = Read-Host "Do you want to continue? (Press N or n to stop)"
}

#Store the contents of Computers.txt into variable $computers
$computers = Get-Content "C:\Computers.txt"

#Compress the Software folder and transfer to the root directory of your PC
Compress-Archive -Path "\\sw\swdepot$\PowerShell\Software" -DestinationPath
"C:\Software"
#Expand the Software folder to the root directory
Expand-Archive -LiteralPath "C:\Software.Zip" -DestinationPath "C:\"

#Stores the location of individual installer in a variable
$firefoxFile = "C:\Software\Firefox.exe"
$chromeFile = "C:\Software\Chrome.exe"
$adobeFile = "C:\Software\Adobe.exe"
$forticlientFile = "C:\Software\FortiClientVPN.exe"
$zoomFile = "C:\Software\Zoom.msi"
$vncFile = "C:\Software\UltraVNC.exe"
$vnciniFile = "C:\Software\UltraVNC.ini"
$7zipFile = "C:\Software\7-Zip.exe"
$javaFile = "C:\Software\Java.exe"
$sophosFile = "C:\Software\Sophos.exe"
$samendpointFile = "C:\Software\SamEndPoint.msi"
$skypeFile = "C:\Software\Skype.exe"
$anydeskFile = "C:\Software\AnyDesk.exe"
$pe1File = "C:\Software\NEWPE1"
$pe3File = "C:\Software\NEWPE3"
$pe5File = "C:\Software\NEWPE5"
$pe6File = "C:\Software\NEWPE6"
$pe7File = "C:\Software\NEWPE7"
```

```
<#Foreach loop is used to remote install the 13 standard softwares onto each computer loop
by loop#>
Foreach ($computer in $computers)
{
  <#Variable $pe is used to store the plant of the computer#>
  $pe = Read-Host “Which plant will this PC deployed to? (PE1, PE3, PE5, PE6, PE7)”
  <#The while loop technically will loop forever, but will stop by the break statement in
  each if/elseif statement, if there is no input meets the condition for the if/elseif statement,
  the code in the else statement will be executed, which is asking for input again, restarting
  the loop#>
  While ($pe)
  {
    <#The first line of code in the if/elseif statement will compress respective printer driver
    folder and transfer to the remote computer, the second line will unzip the folder on the
    local administrator’s Desktop, the third line will execute the installer, installing the
    printer driver software silently on the remote installer and remove the unwanted zip file
    after installation#>
    if ($pe -eq "PE1")
    {
      Compress-Archive -Path $pe1File -DestinationPath
      \\$computer\c$\Users\Administrator\Desktop\NEWPE1
      Expand-Archive -LiteralPath
      "\\$computer\c$\Users\Administrator\Desktop\NEWPE1.Zip"
      -DestinationPath \\$computer\c$\Users\Administrator\Desktop
      Invoke-Command -ComputerName $computer -ScriptBlock{
        Start-Process -FilePath "C:\Users\Administrator\Desktop\NEWPE1\execPkg.exe"
        -Args "/silent /install" -Verb RunAs -Wait
      RM "C:\Users\Administrator\Desktop\NEWPE1.Zip"
      }
      break
    }
    elseif ($pe -eq "PE3")
    {
      Compress-Archive -Path $pe3File -DestinationPath
      \\$computer\c$\Users\Administrator\Desktop\NEWPE3
      Expand-Archive -LiteralPath
      "\\$computer\c$\Users\Administrator\Desktop\NEWPE3.Zip"
      -DestinationPath \\$computer\c$\Users\Administrator\Desktop
      Invoke-Command -ComputerName $computer -ScriptBlock{
        Start-Process -FilePath "C:\Users\Administrator\Desktop\NEWPE3\execPkg.exe"
        -Args "/silent /install" -Verb RunAs -Wait
      RM "C:\Users\Administrator\Desktop\NEWPE3.Zip"
      }
      break
    }
    elseif ($pe -eq "PE5")
    {
      Compress-Archive -Path $pe5File -DestinationPath
      \\$computer\c$\Users\Administrator\Desktop\NEWPE5
      Expand-Archive -LiteralPath
```

```
        "\\$computer\c$\Users\Administrator\Desktop\NEWPE5.Zip"
        -DestinationPath \\$computer\c$\Users\Administrator\Desktop
        Invoke-Command -ComputerName $computer -ScriptBlock{
          Start-Process -FilePath "C:\Users\Administrator\Desktop\NEWPE5\execPkg.exe"
          -Args "/silent /install" -Verb RunAs -Wait
        RM "C:\Users\Administrator\Desktop\NEWPE5.Zip"
        }
        break
      }
      elseif ($pe -eq "PE6")
      {
        Compress-Archive -Path $pe6File -DestinationPath
        \\$computer\c$\Users\Administrator\Desktop\NEWPE6
        Expand-Archive -LiteralPath
        "\\$computer\c$\Users\Administrator\Desktop\NEWPE6.Zip"
        -DestinationPath \\$computer\c$\Users\Administrator\Desktop
        Invoke-Command -ComputerName $computer -ScriptBlock{
          Start-Process -FilePath "C:\Users\Administrator\Desktop\NEWPE6\execPkg.exe"
          -Args "/silent /install" -Verb RunAs -Wait
        RM "C:\Users\Administrator\Desktop\NEWPE6.Zip"
        }
        break
      }
      elseif ($pe -eq "PE7")
      {
        Compress-Archive -Path $pe7File -DestinationPath
        \\$computer\c$\Users\Administrator\Desktop\NEWPE7
        Expand-Archive -LiteralPath
        "\\$computer\c$\Users\Administrator\Desktop\NEWPE7.Zip"
        -DestinationPath \\$computer\c$\Users\Administrator\Desktop
        Invoke-Command -ComputerName $computer -ScriptBlock{
          Start-Process -FilePath "C:\Users\Administrator\Desktop\NEWPE7\execPkg.exe"
          -Args "/silent /install" -Verb RunAs -Wait
        RM "C:\Users\Administrator\Desktop\NEWPE7.Zip"
        }
        break
      }
      else
      {
        Write-Host “Invalid input. Please ensure input or spelling is correct.”
        $pe = Read-Host “Which plant will this PC deployed to? (PE1, PE3, PE5, PE6, PE7)”
      }
    }

#Copy each installer to the root directory of the remote computer
Copy-Item $firefoxFile -Destination "\\$computer\c$\Firefox.exe"
Copy-Item $chromeFile -Destination "\\$computer\c$\Chrome.exe"
Copy-Item $adobeFile -Destination "\\$computer\c$\Adobe.exe"
Copy-Item $forticlientFile -Destination "\\$computer\c$\FortiClientVPN.exe"
Copy-Item $zoomFile -Destination "\\$computer\c$\Zoom.msi"
```

```
Copy-Item $vncFile -Destination "\\$computer\c$\UltraVNC.exe"
Copy-Item $vnciniFile -Destination "\\$computer\c$\UltraVNC.ini"
Copy-Item $javaFile -Destination "\\$computer\c$\Java.exe"
Copy-Item $7zipFile -Destination "\\$computer\c$\7-Zip.exe"
Copy-Item $sophosFile -Destination "\\$computer\c$\Sophos.exe"
Copy-Item $samendpointFile -Destination "\\$computer\c$\SamEndPoint.msi"
Copy-Item $skypeFile -Destination "\\$computer\c$\Skype.exe"
Copy-Item $anydeskFile -Destination "\\$computer\c$\AnyDesk.exe"

#Execute the installer to install the softwares silently on the remote computer
Invoke-Command -ComputerName $computer -ScriptBlock{
   Start-Process -FilePath "C:\Firefox.exe" -Args "/silent /install" -Verb RunAs -Wait
   Start-Process -FilePath "C:\Chrome.exe" -Args "/silent /install" -Verb RunAs -Wait
   Start-Process -FilePath "C:\Adobe.exe" -Args "/silent /install" -Verb RunAs -Wait
   Start-Process -FilePath "C:\FortiClientVPN.exe" -Args "/quiet /norestart"
   msiexec /i "C:\Zoom.msi" /quiet /qn /norestart /log install.log
   Start-Process -FilePath "C:\UltraVNC.exe" -Args "/verysilent /norestart
   /loadinf=`"C:\UltraVNC.ini`"" -Wait -NoNewWindow
   Start-Process -FilePath "C:\Java.exe" -ArgumentList "/s" -Verb RunAs -Wait
   Start-Process -FilePath "C:\7-Zip.exe" -Args "/S /install" -Verb RunAs -Wait
   Start-Process -FilePath "C:\Sophos.exe" -ArgumentList "--quiet" -Verb RunAs -Wait
   Start-Process -FilePath "C:\Skype.exe" -ArgumentList "/VERYSILENT /NORESTART
   /SUPPRESSMSGBOXEX /DL=1" -Verb RunAs -Wait
   Start-Process -FilePath "C:\AnyDesk.exe"
   -ArgumentList '--install "C:\Program Files (x86)" --start-with-win --create-shortcuts
   --create-desktop-icon --silent' -Wait

   #Remove the installer on the remote computer after installation
   RM C:\Firefox.exe
   RM C:\Chrome.exe
   RM C:\Adobe.exe
   RM C:\FortiClientVPN.exe
   RM C:\Zoom.msi
   RM C:\UltraVNC.exe
   RM C:\UltraVNC.ini
   RM C:\Java.exe
   RM C:\7-Zip.exe
   RM C:\Sophos.exe
   RM C:\SamEndPoint.msi
   RM C:\Skype.exe
   RM C:\AnyDesk.exe
 }
}

#Remove files and folders after multiple remote installation
RM C:\Computers.txt
RM C:\Software -Recurse
RM C:\Software.zip
```

Local.ps1

```
#Compress the Software folder and transfer to the root directory of your PC
Compress-Archive -Path \\sw\swdepot$\PowerShell\Software -DestinationPath "C:\Software"
#Expand the Software folder to the root directory
Expand-Archive -LiteralPath "C:\Software.Zip" -DestinationPath "C:\"

#Variable $pe is used to store the plant of the computer
$pe = Read-Host "Which plant will this PC deployed to? (PE1, PE3, PE5, PE6, PE7)"

<#The while loop technically will loop forever, but will stop by the break statement in
each if/elseif statement, if there is no input meets the condition for the if/elseif statement,
the code in the else statement will be executed, which is asking for input again, restarting
the loop#>
While ($pe)
{
    <#The first line of code in the if/elseif statement will compress respective printer driver
    folder and transfer to the remote computer, the second line will unzip the folder on the
    local administrator's Desktop, the third line will execute the installer, installing the
    printer driver software silently on the remote installer and remove the unwanted zip file
   after installation#>
    if ($pe -eq "PE1")
    {
      Compress-Archive C:\Software\NEWPE1 -DestinationPath
      "C:\Users\Administrator\Desktop\NEWPE1"
      Expand-Archive -LiteralPath
      "C:\Users\Administrator\Desktop\NEWPE1.Zip"
      -DestinationPath "C:\Users\Administrator\Desktop"
      Start-Process C:\Users\Administrator\Desktop\NEWPE1\execPkg.exe
      -ArgumentList "/quiet" -Wait
      RM C:\Users\Administrator\Desktop\NEWPE1.Zip
      break
    }
    elseif ($pe -eq "PE3")
    {
      Compress-Archive C:\Software\NEWPE3 -DestinationPath
      "C:\Users\Administrator\Desktop\NEWPE3"
      Expand-Archive -LiteralPath
      "C:\Users\Administrator\Desktop\NEWPE3.Zip"
      -DestinationPath "C:\Users\Administrator\Desktop"
      Start-Process C:\Users\Administrator\Desktop\NEWPE3\execPkg.exe
      -ArgumentList "/quiet" -Wait
      RM C:\Users\Administrator\Desktop\NEWPE3.Zip
      break
    }
    elseif ($pe -eq "PE5")
    {
      Compress-Archive C:\Software\NEWPE5 -DestinationPath
      "C:\Users\Administrator\Desktop\NEWPE5"
      Expand-Archive -LiteralPath
```

```
        "C:\Users\Administrator\Desktop\NEWPE5.Zip"
        -DestinationPath "C:\Users\Administrator\Desktop"
        Start-Process C:\Users\Administrator\Desktop\NEWPE5\execPkg.exe
        -ArgumentList "/quiet" -Wait
        RM C:\Users\Administrator\Desktop\NEWPE5.Zip
        break
    }
    elseif ($pe -eq "PE6")
    {
        Compress-Archive C:\Software\NEWPE6 -DestinationPath
        "C:\Users\Administrator\Desktop\NEWPE6"
        Expand-Archive -LiteralPath
        "C:\Users\Administrator\Desktop\NEWPE6.Zip"
        -DestinationPath "C:\Users\Administrator\Desktop"
        Start-Process C:\Users\Administrator\Desktop\NEWPE6\execPkg.exe
        -ArgumentList "/quiet" -Wait
        RM C:\Users\Administrator\Desktop\NEWPE6.Zip
        break
    }
    elseif ($pe -eq "PE7")
    {
        Compress-Archive C:\Software\NEWPE7 -DestinationPath
        "C:\Users\Administrator\Desktop\NEWPE7"
        Expand-Archive -LiteralPath
        "C:\Users\Administrator\Desktop\NEWPE7.Zip"
        -DestinationPath "C:\Users\Administrator\Desktop"
        Start-Process C:\Users\Administrator\Desktop\NEWPE7\execPkg.exe
        -ArgumentList "/quiet" -Wait
        RM C:\Users\Administrator\Desktop\NEWPE7.Zip
        break
    }
    else
    {
        Write-Host “Invalid input. Please ensure input or spelling is correct.”
        $pe = Read-Host “Which plant will this PC deployed to? (PE1, PE3, PE5, PE6, PE7)”
    }
}

#Execute the installer to install the softwares silently on the computer
Start-Process C:\Software\Sophos.exe -ArgumentList "--quiet"
Start-Process C:\Software\Firefox.exe -ArgumentList "/silent /install" -Wait
Start-Process C:\Software\Chrome.exe -ArgumentList  "/silent /install" -Wait
Start-Process C:\Software\Adobe.exe -ArgumentList "/sAll /rs" -Wait
Start-Process msiexec.exe -ArgumentList "/i C:\Software\FortiClientVPN.msi
REBOOT=ReallySuppress /qn" -Wait
Start-Process msiexec.exe -ArgumentList "/i C:\Software\Zoom.msi /quiet /norestart" -Wait
Start-Process C:\Software\UltraVNC.exe -ArgumentList "/verysilent /norestart
/loadinf=`"C:\Software\UltraVNC.ini`"" -Wait
Start-Process C:\Software\Java.exe -ArgumentList "/s" -Wait
Start-Process C:\Software\7-Zip.exe -ArgumentList "/S" -Wait
```

```
Start-Process C:\Software\Skype.exe -ArgumentList "/VERYSILENT /NORESTART
/SUPPRESSMSGBOXEX /DL=1" -Wait
Start-Process C:\Software\AnyDesk.exe -ArgumentList "--install C:\Program Files (x86) --
start-with-win --create-shortcuts --create-desktop-icon --silent" -Wait
Start-Process msiexec.exe -ArgumentList "/i C:\Software\SamEndPoint.msi /quiet /norestart"
-Wait

<#There are times where Sophos had been installed, but if you take a look in task manager,
the installer is still running but its CPU usage is 0%, this code snippet is used to overcome
this issue#>
#Check if Sophos is installed, check if the installer is still running, if it does, kill the process
$sophosInstalled = Test-Path -Path "C:\Program Files\Sophos"
if($sophosInstalled)
{
   $sophosProcess = Get-Process Sophos -Erroraction SilentlyContinue
   if($sophosProcess)
   {
      Stop-Process -Name Sophos -Force
   }
}

#Remove files and folders after multiple remote installation
RM C:\Software -Recurse
RM C:\Software.zip
```