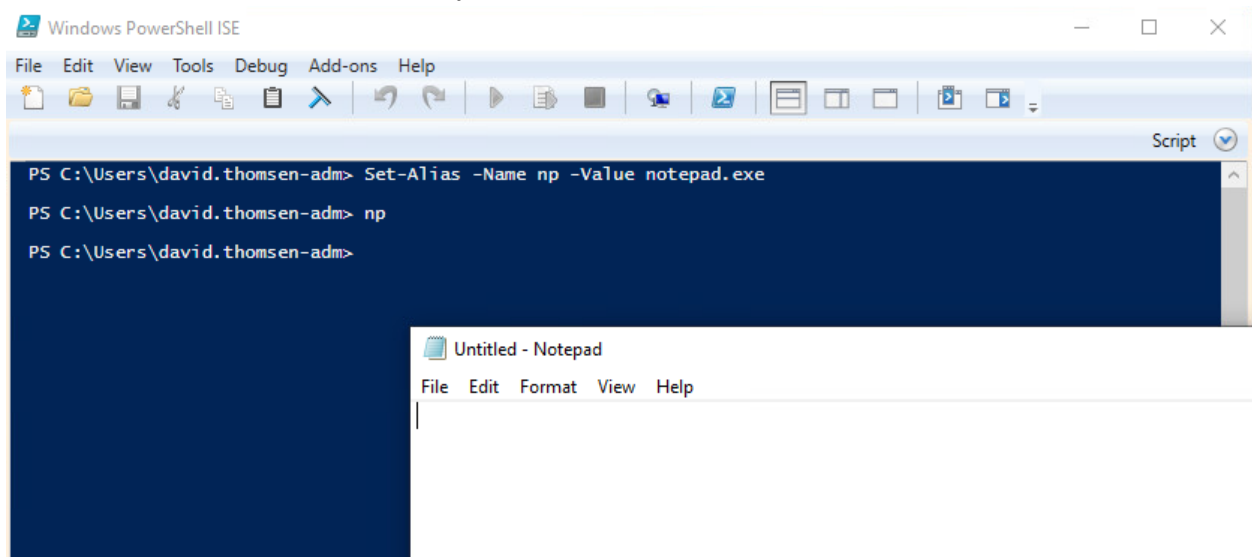


David Thomsen
SYS-255

Deliverable 1. Create and demonstrate your own alias **other than ifconfig**. Provide a screenshot of the alias creation syntax and execution.



Deliverable 2. Extend this script to ping each server in the list one time (the switch for ping count is different in Windows). Provide a screenshot showing the syntax and output of your script.

```
PS C:\Users\david.thomsen-adm> .\servers.ps1
champlain.edu

Pinging champlain.edu [208.115.107.132] with 32 bytes of data:
Reply from 208.115.107.132: bytes=32 time=79ms TTL=48

Ping statistics for 208.115.107.132:
    Packets: Sent = 1, Received = 1, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 79ms, Maximum = 79ms, Average = 79ms
vermont.gov

Pinging vermont.gov [199.107.32.35] with 32 bytes of data:
Reply from 199.107.32.35: bytes=32 time=40ms TTL=233

Ping statistics for 199.107.32.35:
    Packets: Sent = 1, Received = 1, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 40ms, Maximum = 40ms, Average = 40ms
mcsp.one

Pinging mcsp.one [217.160.0.8] with 32 bytes of data:
Reply from 217.160.0.8: bytes=32 time=106ms TTL=50

Ping statistics for 217.160.0.8:
    Packets: Sent = 1, Received = 1, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 106ms, Maximum = 106ms, Average = 106ms
```



servers - Notepad

```
File Edit Format View Help
$servers=Get-Content .\servers.txt
foreach($server in $servers){
{
Write-Host $server
ping $server -n 1
}
```

Deliverable 3. Write a script that takes two parameters that include the DNS response Type and a file with a list of hosts. Your output should look similar to the following. You may need to conduct some research to see how to pass more than one parameter. Provide a screenshot of your syntax and execution output.

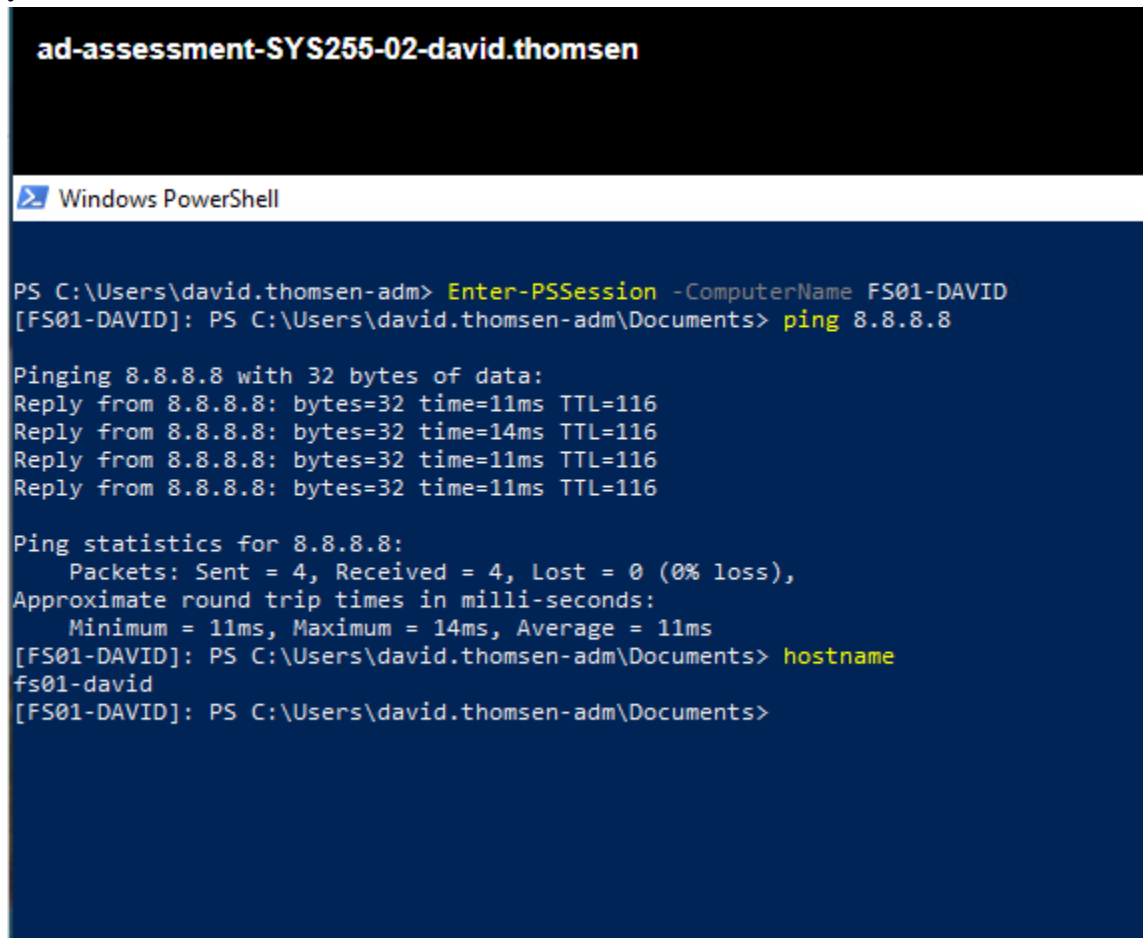
```
PS C:\Users\david.thomsen-adm> .\dns.ps1 .\servers.txt A
```

Name	Type	TTL	Section	IPAddress
-----	----	---	-----	-----
champlain.edu	A	299	Answer	208.115.107.132
vermont.gov	A	26598	Answer	199.107.32.35
mcsp.one	A	1399	Answer	217.160.0.8

```
dns - Notepad
File Edit Format View Help
param(
[string] $listofthings,
[string] $type
)

foreach($thing in Get-Content $listofthings)
{
Resolve-DnsName $thing -Type "$type"
}
```

Deliverable 4. Provide a screenshot that shows a remote PS-Session and the command of your choice on FS01.



The screenshot shows a Windows PowerShell terminal window with a title bar that reads "ad-assessment-SYS255-02-david.thomsen". The terminal content shows a user at the prompt "PS C:\Users\david.thomsen-adm>" entering the command "Enter-PSSession -ComputerName FS01-DAVID". This opens a remote session where the prompt changes to "[FS01-DAVID]: PS C:\Users\david.thomsen-adm\Documents>". The user then enters "ping 8.8.8.8", which returns four replies with varying times (11ms, 14ms, 11ms, 11ms) and a TTL of 116. Following this, the user enters "hostname", which returns "fs01-david". The prompt then returns to the local machine: "[FS01-DAVID]: PS C:\Users\david.thomsen-adm\Documents>".

```
ad-assessment-SYS255-02-david.thomsen

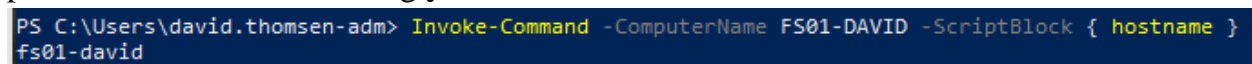
Windows PowerShell

PS C:\Users\david.thomsen-adm> Enter-PSSession -ComputerName FS01-DAVID
[FS01-DAVID]: PS C:\Users\david.thomsen-adm\Documents> ping 8.8.8.8

Pinging 8.8.8.8 with 32 bytes of data:
Reply from 8.8.8.8: bytes=32 time=11ms TTL=116
Reply from 8.8.8.8: bytes=32 time=14ms TTL=116
Reply from 8.8.8.8: bytes=32 time=11ms TTL=116
Reply from 8.8.8.8: bytes=32 time=11ms TTL=116

Ping statistics for 8.8.8.8:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 11ms, Maximum = 14ms, Average = 11ms
[FS01-DAVID]: PS C:\Users\david.thomsen-adm\Documents> hostname
fs01-david
[FS01-DAVID]: PS C:\Users\david.thomsen-adm\Documents>
```

Deliverable 5. The following command shows how one can just launch a command remotely without having an interactive session. Explore the -ScriptBlock Option and provide a screenshot showing **your own command** launched on FS01.



The screenshot shows a Windows PowerShell terminal window with the prompt "PS C:\Users\david.thomsen-adm>". The user enters the command "Invoke-Command -ComputerName FS01-DAVID -ScriptBlock { hostname }". The terminal returns the output "fs01-david".

```
PS C:\Users\david.thomsen-adm> Invoke-Command -ComputerName FS01-DAVID -ScriptBlock { hostname }
fs01-david
```

Deliverable 6. Using Powershell on AD, figure out how to add a single user to Active Directory, and how to add that user to a domain group that you create. Provide a screenshot that shows the command syntax and execution w/ response.

```
PS C:\Windows\system32> New-ADUser
```

```
cmdlet New-ADUser at command pipeline position 1  
Supply values for the following parameters:  
Name: Dave
```

```
PS C:\Windows\system32> New-ADGroup
```

```
cmdlet New-ADGroup at command pipeline position 1  
Supply values for the following parameters:  
GroupScope: Global  
Name: PeopleNamedDave
```

```
PS C:\Windows\system32> Add-ADGroupMember
```

```
cmdlet Add-ADGroupMember at command pipeline position 1  
Supply values for the following parameters:  
Identity: PeopleNamedDave  
Members[0]: Dave  
Members[1]:  
PS C:\Windows\system32>
```

Deliverable 7: If you try the PS-Remoting commands against your workstation, it may fail due to firewall and other issues. Research the problem and see if you can resolve them. Take a screenshot of remote command invocation from AD to your workstation.

A Side Note: I was unsure of what this question was asking for entirely and after getting just about 8,000 errors after a long day I have stopped attempting it for now and will ask in class tomorrow.

```
PS C:\Windows\system32> Invoke-Command -ComputerName WS02-DAVID -ScriptBlock { Enable-PSRemoting }
[WS02-DAVID] Connecting to remote server WS02-DAVID failed with the following error message : WinRM cannot process the
request. The following error occurred while using Kerberos authentication: Cannot find the computer WS02-DAVID. Verify
that the computer exists on the network and that the name provided is spelled correctly. For more information, see the
about_Remote_Troubleshooting Help topic.
+ CategoryInfo          : OpenError: (WS02-DAVID:String) [], PSRemotingTransportException
+ FullyQualifiedErrorId : NetworkPathNotFound,PSSessionStateBroken
PS C:\Windows\system32> Invoke-Command -ComputerName WKS02-DAVID -ScriptBlock { Enable-PSRemoting }
[WKS02-DAVID] Connecting to remote server WKS02-DAVID failed with the following error message : WinRM cannot complete
the operation. Verify that the specified computer name is valid, that the computer is accessible over the network, and
that a firewall exception for the WinRM service is enabled and allows access from this computer. By default, the WinRM
firewall exception for public profiles limits access to remote computers within the same local subnet. For more
information, see the about_Remote_Troubleshooting Help topic.
+ CategoryInfo          : OpenError: (WKS02-DAVID:String) [], PSRemotingTransportException
+ FullyQualifiedErrorId : WinRMOperationTimeout,PSSessionStateBroken
PS C:\Windows\system32> Invoke-Command -ComputerName WKS02-DAVID -ScriptBlock { Set-NetFirewallRule -Name 'WINRM-HTTP-In
-TCP' -RemoteAddress Any }
[WKS02-DAVID] Connecting to remote server WKS02-DAVID failed with the following error message : WinRM cannot complete
the operation. Verify that the specified computer name is valid, that the computer is accessible over the network, and
that a firewall exception for the WinRM service is enabled and allows access from this computer. By default, the WinRM
firewall exception for public profiles limits access to remote computers within the same local subnet. For more
information, see the about_Remote_Troubleshooting Help topic.
+ CategoryInfo          : OpenError: (WKS02-DAVID:String) [], PSRemotingTransportException
+ FullyQualifiedErrorId : WinRMOperationTimeout,PSSessionStateBroken
PS C:\Windows\system32> Invoke-Command -ComputerName WKS02-DAVID -ScriptBlock { Enable-PSRemoting -SkipNetworkProfileChe
ck -Force }
[WKS02-DAVID] Connecting to remote server WKS02-DAVID failed with the following error message : WinRM cannot complete
the operation. Verify that the specified computer name is valid, that the computer is accessible over the network, and
that a firewall exception for the WinRM service is enabled and allows access from this computer. By default, the WinRM
firewall exception for public profiles limits access to remote computers within the same local subnet. For more
information, see the about_Remote_Troubleshooting Help topic.
+ CategoryInfo          : OpenError: (WKS02-DAVID:String) [], PSRemotingTransportException
+ FullyQualifiedErrorId : WinRMOperationTimeout,PSSessionStateBroken
PS C:\Windows\system32> Enter-PSSession -ComputerName WKS02-DAVID
Enter-PSSession : Connecting to remote server WKS02-DAVID failed with the following error message : WinRM cannot
complete the operation. Verify that the specified computer name is valid, that the computer is accessible over the
network, and that a firewall exception for the WinRM service is enabled and allows access from this computer. By
default, the WinRM firewall exception for public profiles limits access to remote computers within the same local
subnet. For more information, see the about_Remote_Troubleshooting Help topic.
At line:1 char:1
+ Enter-PSSession -ComputerName WKS02-DAVID
+ ~~~~~
+ CategoryInfo          : InvalidArgument: (WKS02-DAVID:String) [Enter-PSSession], PSRemotingTransportException
+ FullyQualifiedErrorId : CreateRemoteRunspaceFailed
PS C:\Windows\system32>
```