

Executing Background Jobs on Remote Computers



Liam Cleary

CEO / MICROSOFT MVP / MICROSOFT CERTIFIED TRAINER

@shareplicity www.shareplicity.com | @helloitsliam www.helloitsliam.com



Overview



Executing Commands on Remote Computers

Creating Remote Background Jobs

Remove Remote Background Jobs

Waiting for Remote Background Jobs



Executing Commands on Remote Computers



System Requirements for Remoting



**PowerShell Version
3.0 or Higher**



**Microsoft .NET
Framework 4.0 or
Higher**



**Windows Remote
Management 3.0**



User Permissions

Need to have administrator credentials in order to operate PowerShell remotely. Need to be a part of the Administrators group on both the local and remote machines, or you can provide the administrator credentials when prompted



Display Commands for Remoting

List all Commands that can be used for Remoting

```
Get-Command | where { $_.parameters.keys -contains "ComputerName" }
```



Using Interactive PowerShell Sessions

Creating a Remote Interactive PowerShell Session

```
Enter-PSSession "ComputerName"
```

Exit a Remote Interactive PowerShell Session

```
Exit-PSSession
```

Create Persistent Non-Interactive PowerShell Sessions

```
$sessions = New-PSSession -ComputerName "Computer1", "Computer2"
```

Execute Commands within Persistent Non-Interactive PowerShell Sessions

```
Invoke-Command -Session $sessions -ScriptBlock { $processes = Get-Process }
```



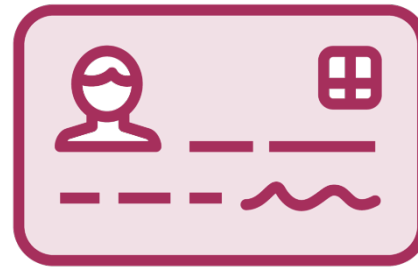
Creating Remote Background Jobs



Remote Commands



Computer Name
Parameter



Credential Parameter
(Optional)



Script Block
Parameter

Creating a Remote Background Job

Run a Command on a Remote Computer

```
Invoke-Command -ComputerName "Computer1" `
    -Credential "DOMAIN\User" `
    -ScriptBlock { Get-Process }
```

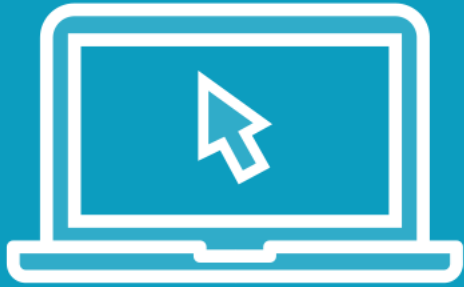
Create Remote Background Jobs on Remote Computers

```
$session = New-PSSession -ComputerName "Computer1", "Computer2"
```

```
Invoke-Command -Session $session `
    -ScriptBlock { Get-Process } `
    -AsJob
```



Demo



Create Remote Background Jobs



Remove Remote Background Jobs



Removing Jobs

Create Remote Background Jobs on Remote Computers, then Remove

```
$session = New-PSSession -ComputerName "Computer1", "Computer2"
```

```
$job = Invoke-Command -Session $session `
    -ScriptBlock { Get-Process } `
    -AsJob
```

```
$job = Get-Job
```

```
$job | Remove-Job -Force
```



Demo



Remove Remote Background Jobs



Waiting for Remote Background Jobs



Waiting for Remote Background Jobs

```
# Waiting for Remote Jobs started Using "Start-Job"
$session = New-PSSession "Computer1", "Computer2", "Computer3"

Invoke-Command -Session $session `
    -ScriptBlock { Start-Job -Name "Job1" `
        -ScriptBlock { Get-Process } `
    }

$done = Invoke-Command -Session $session `
    -Command { Wait-Job -Name "Job1" }
```



Demo



Waiting for Remote Background Jobs



Summary



Reviewed How to Execute Commands on Remote Computers

Created and Removed Remote Background Jobs

Walked Through How to Wait for Remote Background Jobs to Complete



Up Next:

Troubleshooting Failed Background Jobs

