Advanced Scripting   
Jobs

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Document Prepared for: CIT361 Student

# Name Daniel Harris ID 235868292

# Instructions

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# Overview

Jobs are PowerShell’s version of asynchronous processing. The following cmdlets are used to work with jobs.

* Start-Job #Creates new background process
* Get-Job #gets a list of jobs
* Receive-Job #Get results from specific job
* Remove-Job #Removes job from job table
* Stop-Job #Stops a Job
* Wait-Job #Waits for one or more jobs to complete
* Debug-Job #Debugs scriptblock executed by job
* Suspend-Job #saves state and pauses job (workflows only)
* Resume-Job #loads previously saved job (workflows only)

# Requirements

PowerShell

# Setup

# Task 1—Starting Jobs

## Steps

1. Create a new job that simply counts by one every 3 seconds  
   Start-Job -ScriptBlock {while($true){$i++;$i;Start-Sleep 3}}
   1. The job information is returned,.
      1. What is the JobId? 1
      2. What is the Name? Job1
2. Start another job, this time it will count by 10, you will also name this job  
   Start-Job -Script {while($true){$i+=10;$i;Start-Sleep 3}} -name NotBy1
   1. From the job information returned
      1. What is the JobId? 2
      2. What is the Name? NotBy1
3. Start another job this time counting by 100 using the same NotBy1 name  
   Start-Job -Script {while($true){$i+=100;$i;Start-Sleep 3}} -name NotBy1
   1. From the job information returned
      1. What is the JobId? 5
      2. What is the Name? NotBy1
4. Start one more job this time counting by 1000 using the same NotBy1 name  
   Start-Job -Script {while($true){$i+=1000;$i;Start-Sleep 3}} -name NotBy1
   1. From the job information returned
      1. What is the JobId? 7
5. What is the Name? NotBy1
6. See a list of the background jobs  
   Get-Job
   1. What is the Id of the job counting by 1? 1 What is its name? Job1
   2. What is the Id of the job counting by 10? 3 What is its name? NotBy1
   3. What is the Id of the job counting by 100? 5 What is its name? NotBy1
   4. Are the job Ids sequential? Yes

# Task 2—Getting Data from Jobs

## Steps

1. Get the data from the count by 1 job, to do this you need to know the job name or id, use the id, replace the <count by 1 id> in the command with the jobs actual id.  
   Receive-Job <count buy 1 id>
   1. Did you get the results from the correct job? yes
   2. How far has it counted? 58
2. Wait at least 3 seconds since the previous command then get the job data again from the count by 1 job  
   Receive-Job <count by 1 id>
   1. What was returned? Counting up to 63
   2. Did you get the previous data again? no
3. Get the data from the job named NotBy1  
   Receive-Job NotBy1
   1. What was returned? Counting by 1000 job
4. How would you get the data from just the count by 10 job? Get-job <jobid by10>
5. You can store jobs in variables as well. Store each of the jobs in a variable use the appropriate Job IDs  
   $j1=Get-Job <id for count by 1 job>  
   $j10=Get-Job < id for count by 10 job >  
   $j10=Get-Job < id for count by 100 job >
6. Get the count by one job data  
   Receive-Job $j1
7. You can also store the job output in a variable  
   $j1data= Receive-Job $j1
   1. What datatype is in $j1data? System.array
   2. What data type are the elements in $j1Data object[]

# Task 3—Terminating jobs.

## Steps

1. Get rid of the count by 1 job. You can identify jobs by ID, Name or by passing a job object  
   Remove-Job $j1
   1. What was the resulting message? Cannot remove job while it’s running
2. You can get rid of a running job with the -force parameter  
   Remove-Job $j1 -Force
   1. What was the resulting? The job was removed
3. Get the running jobs  
   Get-Job
   1. Is the count by one job listed? no
4. Stop the count by 10 job  
   Stop-Job $j10
5. View the job  
   $j10
   1. What is the job’s state? stopped
   2. Does it have data? yes
6. Receive the count by 10 data  
   Receive-Job $j10
7. View the job status  
   $j10
8. Does the Job have more data? no
9. Remove the job  
   Remove-Job $j10
10. Get a list of the jobs.
    1. Is the count by 10 job listed? nobe
11. Remove all the remaining jobs  
    Get-Job|Remove-Job -force
12. View the jobs, are they all gone? yes

# Deliverable

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