




What is a PowerShell Job?



PowerShell only lets you run one command at a time
Long running commands will "tie-up" your prompt
Send long running commands and scripts to the background
Retrieve results when you want

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PowerShell Job Architecture

PowerShell jobs use the remoting infrastructure

Jobs consist of one parent or executive job

...and then 1 or more child jobs

The parent coordinates the work of the children

We generally use the Job cmdlets with the parent job

PowerShell 3 has several job types. This lesson is on background jobs

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Creating a Background Job

Use Start-Job cmdlet

- Access local resources
- Run a PowerShell scriptblock
- Run a PowerShell script
- Name your job
- Pass argument list
- Initialize environment (e.g. import a module)

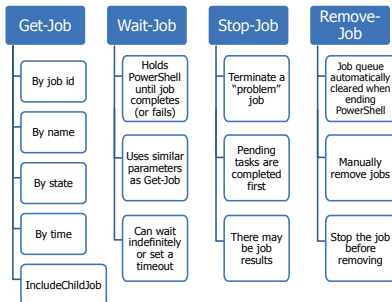
Use -AsJob Parameter

- Typically accesses remote resources
- Invoke-Command
- Get-WMIObject
- Invoke-WMIMethod
- Restart-Computer
- Can't specify a job name

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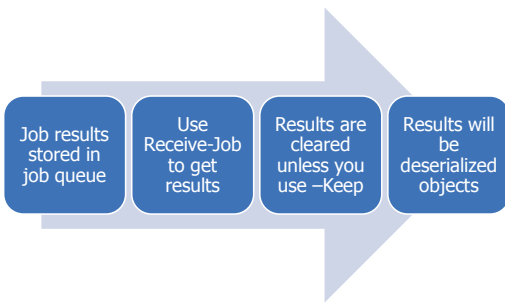
Creating PowerShell Jobs

Managing Jobs



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Getting Job Results



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Troubleshooting Failed Jobs

A failed job may still have results
Sometimes the error will be returned with results
Job object has a JobStateInfo object with a Reason property which can explain why a job failed

```
PS C:\> (get-job 41).JobStateInfo.reason.message  
Access is denied. (Exception from HRESULT:  
0x80070005 (E_ACCESSDENIED))
```

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Using PowerShell Jobs

Running Jobs on Remote Computers

Normally when using Invoke-Command, job queue is local but command runs remotely

- Results written to local job queue

Remote jobs run everything on the remote computer

- Useful for scaling out
- Requires the use of a maintained PSsession
- Run job cmdlets in the remote session

```
PS C:\> invoke-command { start-job  
{MyCommand}} -Session $sess
```

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Remote Job Demo

Lab

1. Create a local background job to find the latest 100 errors in the system event log. Then retrieve the results.

2. Run a remote command to get the size of the \$env:temp folder on one or more remote computers, or specify your computer name and localhost. But do this as a local background job. Retrieve the results.

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