

PowerShell 3.0 Scheduled Jobs

Jeffery Hicks

Windows PowerShell MVP

<http://jdhitsolutions.com/blog>

Agenda

- ≥ What am I talking about?
- ≥ Job Enhancements in PowerShell 3.0
- ≥ Creating a scheduled job
- ≥ Running a scheduled job
- ≥ Managing a scheduled job
- ≥ Resources
- ≥ Q&A

A Few Notes...

- ≥ All demos will be made available
- ≥ Demos are written mostly as one-liners
- ≥ I'm using a beta of PowerShell 3.0 so no guarantees

Scheduled Jobs vs Tasks

- ≥ Don't confuse this with PowerShell scheduled tasks
- ≥ ...that requires Windows 8 or Windows Server 2012
- ≥ ...manage Task Scheduler with PowerShell
- ≥ PowerShell Scheduled Jobs is different

PowerShell Scheduled Jobs

- ≥ A blend of standard job and scheduled tasks
- ≥ Packaged in the PSScheduleJob module
- ≥ Create one time or recurring tasks
- ≥ Creates a task in Task Scheduler
 - `$home\AppData\Local\Microsoft\Windows\PowerShell\ScheduledJobs`
- ≥ Job history and results are saved in:
 - `$home\AppData\Local\Microsoft\Windows\PowerShell\ScheduledJobs\<JobName>\Output\<Timestamp>`

Scenarios

- ≥ Hourly log performance counter data
- ≥ Daily event log query report
- ≥ Weekly password report
- ≥ Monthly service restart
- ≥ Not limited to PowerShell commands

Job Enhancements in PowerShell 3.0

- ≥ Run jobs in specific PowerShell version
- ≥ Job definitions to run new types
- ≥ Improvements to the job object such as start and end time
- ≥ Job integration with PowerShell WorkFlows

PowerShell Scheduled Jobs

- ≥ New cmdlets for creating and managing scheduled jobs
- ≥ Job queue and results managed with v2 job cmdlets
- ≥ Scheduled jobs are created locally
- ≥ Use PowerShell remoting for everything else
- ≥ Remote computers must be running 3.0

PowerShell Schedule Jobs

- ≥ Define a trigger with `New-JobTrigger`
- ≥ Define your action as a scriptblock or a file
- ≥ Register your job with `Register-ScheduleJob`
 - Specify credentials
 - Specify job options
- ≥ Scheduled jobs can be modified, enabled, disabled and removed
- ≥ Schedules jobs can be manually launched

Define a Trigger

- ≥ New-JobTrigger
- ≥ Set frequency: Once, Daily, Weekly, AtLogon, AtStartup
- ≥ Set time
- ≥ Set days of week and weeks interval
- ≥ Add a random delay

Define Job Options

≥ New-ScheduledJobOption

```
StartIfOnBatteries      : False
StopIfGoingOnBatteries : True
WakeToRun               : False
StartIfNotIdle         : True
StopIfGoingOffIdle     : False
RestartOnIdleResume    : False
IdleDuration           : 00:10:00
IdleTimeout            : 01:00:00
ShowInTaskScheduler    : True
RunElevated             : False
RunWithoutNetwork      : True
DoNotAllowDemandStart  : False
MultipleInstancePolicy : IgnoreNew
JobDefinition          :
```

≥ Parameters to set these options

➤ *PowerShell PowerHour*

Register a scheduled job

- ≥ Register-ScheduledJob
- ≥ Provide a job name
- ≥ Specify scriptblock or script to run
 - Can accept parameters
 - Can initialize environment
- ≥ Define a job trigger
- ≥ Specify a PSCredential if you don't want to use your current credentials

Scheduled Job Process

```
PS C:\> $t=New-jobtrigger -Daily -At  
6:00AM
```

```
PS C:\> $c={get-process | sort WS -  
descending | Select -first 10 |  
export-clicxml "c:\work\$(get-date -  
format yyyyMMdd).xml"}
```

```
PS C:\> Register-ScheduledJob -Name  
"Top WS Processes" -ScriptBlock $c -  
Trigger $t
```

```
PS C:\> Get-ScheduledJob
```

Working with Jobs

```
PS C:\> Start-Job -DefinitionName  
$Name
```

```
PS C:\> Get-Job $Name
```

```
PS C:\> Receive-Job $name -keep
```

Manage Scheduled Jobs

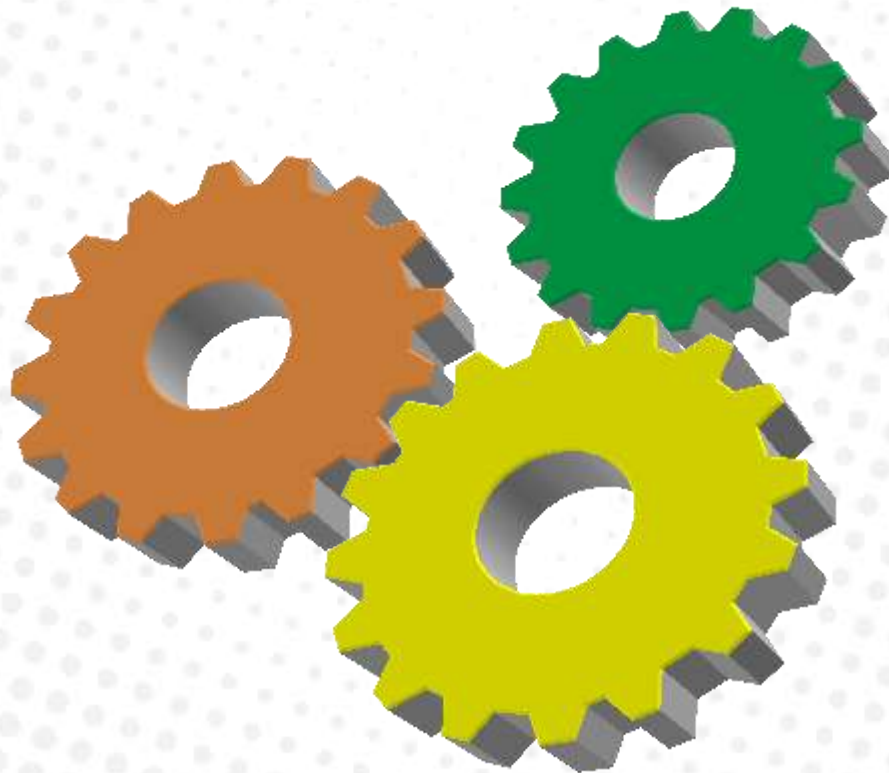
```
PS C:\> Get-ScheduledJobOption -  
Name $name | Set-ScheduledJobOption  
-RunElevated
```

```
PS C:\> Get-JobTrigger $name | Set-  
JobTrigger -DaysOfWeek Thursday -  
Weekly
```

```
PS C:\> Disable-ScheduledJob $name
```

```
PS C:\> Unregister-ScheduledJob  
$name
```

Demo: Scheduled Job



More Resources

- ≥ *PowerShell in Depth: An Administrator's Guide* by Don Jones, Richard Siddaway and Jeffery Hicks (Manning Press, in production)
- ≥ *Learn PowerShell in a Month of Lunches, 2nd Ed.* By Don Jones and Jeffery Hicks (Manning Press, in production)
- ≥ Windows PowerShell Team blog (<http://blogs.msdn.com/powershell>)
- ≥ The Lonely Administrator (<http://jdhitsolutions.com/blog>)
- ≥ Prof. PowerShell (<http://mcpmag.com/articles/list/prof-powershell.aspx>)

Thank You

- ≥ <http://jdhitsolutions.com/blog>
- ≥ jhicks@jdhitsolutions.com

