Working with Objects in PowerShell

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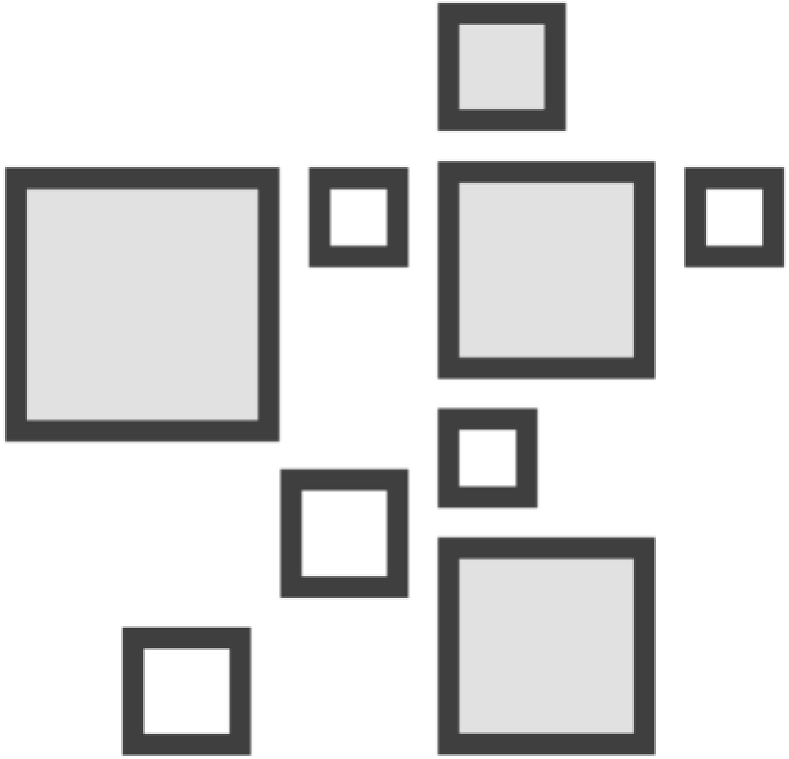
Object

A software representation of some “thing” you want to manage or work with.



An object is “black box”

We don’t care how it is constructed

We want to know how to use it

Everything in PowerShell is some type of object

Object Members

Property

Method

Event

Common Object Types

- String
- Int32
- DateTime
- Boolean
- XML

Type Operators

-Is

-As

```
PS C:\> $s = "foo"
```

Object Notation

Reference an object via a variable

```
PS C:\> $s = "foo"
PS C:\> $s.length
```

Object Notation

Reference an object via a variable

Separate member from the object with a period

```
PS C:\> $s = "foo"
PS C:\> $s.length
3
```

Object Notation

Reference an object via a variable

Separate member from the object with a period

```
PS C:\> $s = "foo"
PS C:\> $s.length
3
PS C:\> $s | Get-Member
```

Object Notation

Reference an object via a variable

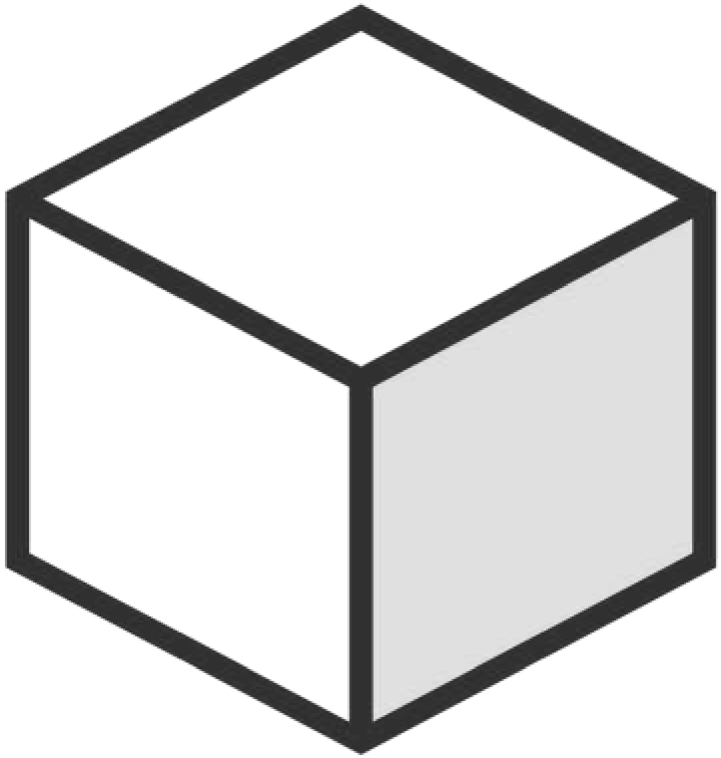
Separate member from the object with a period

Use Get-Member to discover an object’s properties and methods

Demo

Working with Objects

Custom Properties and Objects



Always work with objects

Create custom properties you need

Create custom objects you need

Creating Custom Properties

```
Get-ChildItem -path C:\data -file -recurse |
Select-Object -property Fullname,Name,LastWriteTime,
@{Name = "Size";Expression = {$_.Length}},
@{Name = "Computername";Expression = {$env:computername}},
@{Name = "Audit";Expression = {(Get-Date -format g)}} |
Export-CSV c:\work\data.csv
```

This also creates a custom object

Creating Custom Objects

```
$ps = Get-Process
$svc = Get-Service | Where-Object {$_.status -eq 'running'}

$h = @{
 Computername = $env:computername
 Version      = $PSVersionTable.PSVersion
 ProcessCount = $ps.count
 ServiceCount = $svc.count
 Uptime       = Get-Uptime
}

New-Object -TypeName PSObject -Property $h
```

Use the [pscustomobject] shortcut

Demo

Custom Properties and Objects