

# Deploying WebPageTest

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SALTCONF 15

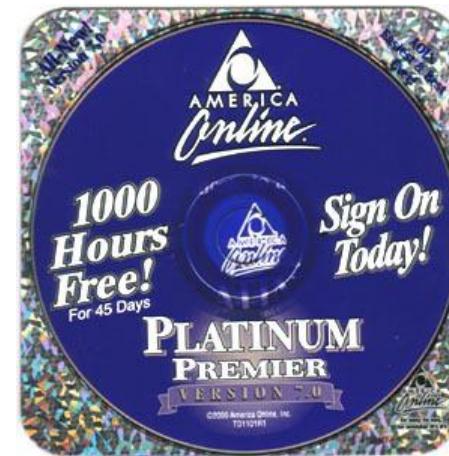
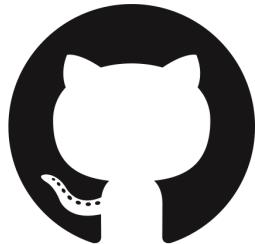


# About Me



Linuturk on Twitter & Github [onitato.com](http://onitato.com)

# About WebPageTest



# Browsers / Devices



## Web Page Performance Test for

[www.onitato.com](http://www.onitato.com)

**From: Chicago, IL - Chrome - Cable**

1/13/2015, 5:04:17 PM

Need help improving?					
<b>F</b>	<b>A</b>	<b>A</b>	<b>N/A</b>	<b>F</b>	
First Byte Time	Keep-alive Enabled	Compress Transfer	Compress Images	Cache static content	Effective use of C

	Load Time	First Byte	Start Render	Speed Index	DOM Elements	Time	Requests	Bytes In	Time	Requests	Bytes In
First View	3.747s	1.192s	3.262s	3304	269	3.747s	20	68 KB	4.025s	20	152 KB
Repeat View	0.721s	0.649s	0.576s	604	269	0.721s	1	0 KB	0.721s	1	0 KB

## Waterfall



## Screen Shot



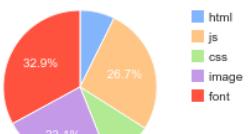
## Video

### Filmstrip View

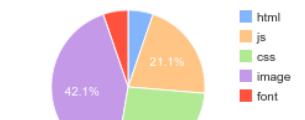
## First View (3.747s)

Repeat View  
(0.721s)

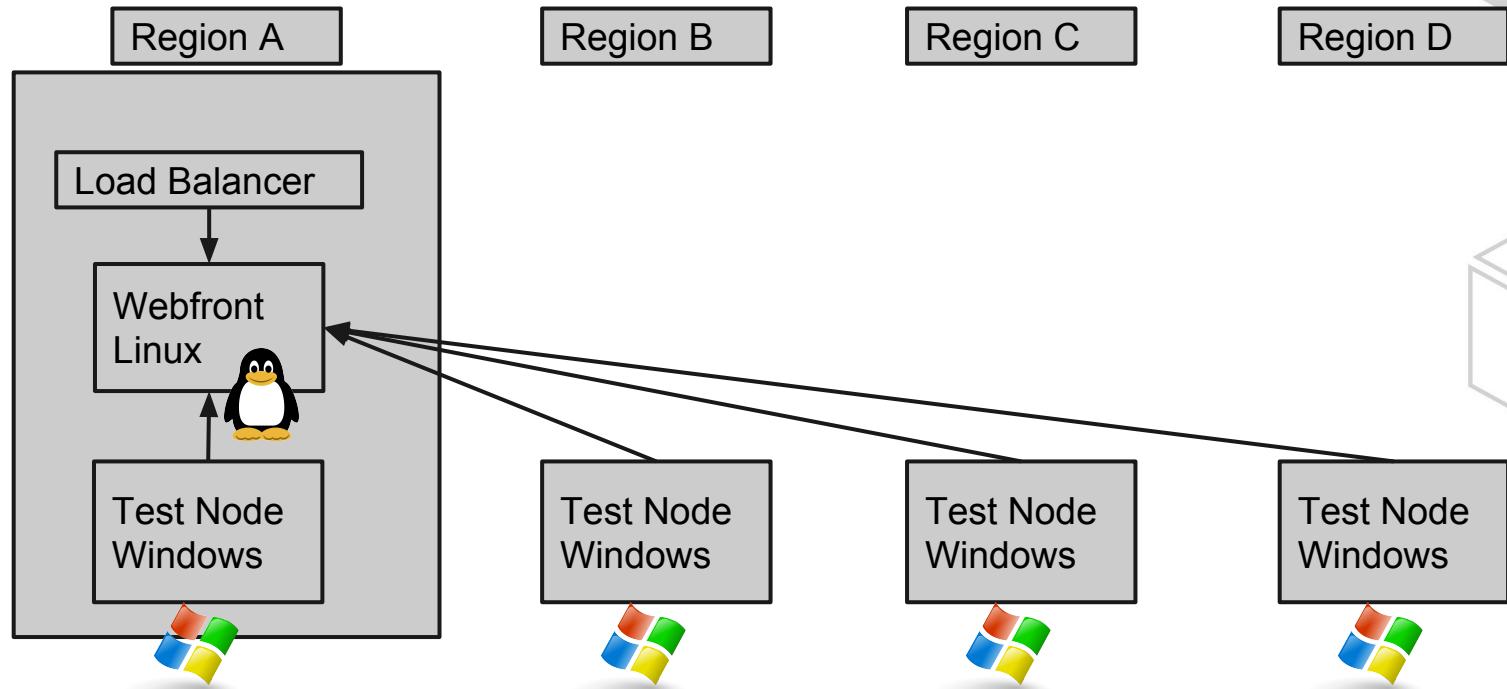
Bytes



## Requests



# Private Instance Architecture



# The Easy Parts



# Salt Cloud - Provider

```
1 my-rackspace-config:  
2     # Set the location of the salt-master  
3     #  
4     minion:  
5         master: <IP or Hostname>  
6  
7         # Configure Rackspace using the OpenStack plugin  
8         #  
9         identity_url: 'https://identity.api.rackspacecloud.com/v2.0/tokens'  
10        compute_name: cloudServersOpenStack  
11        protocol: ipv4  
12  
13        # Set the compute region:  
14        #  
15        compute_region: IAD  
16  
17        # Configure Rackspace authentication credentials  
18        #  
19        user: <username>  
20        tenant: <tenant>  
21        apikey: <apikey>  
22  
23        provider: openstack
```

# Salt Cloud - Profile

```
1 wpt-linux:
2     provider: my-rackspace-config
3     size: 2 GB Performance
4     image: Ubuntu 14.04 LTS (Trusty Tahr) (PVHVM)
5 wpt-windows:
6     provider: my-rackspace-config
7     size: 4 GB Performance
8     image: 59901295-8ae6-4ab4-a697-01261799c8ac
9     win_installer: /root/Salt-Minion-2014.1.7-AMD64-Setup.exe
10    files:
11        'C:\cloud-automation\bootstrap.cmd':
12            /root/bootstrap.cmd
13    grains:
14        wpt_location: Location
15        wpt_label: Label
16        wpt_group: Group
17        wpt_browsers: "Chrome,Firefox,IE"
```

# Salt Cloud - Bootstrap

```
1 netsh advfirewall firewall add rule name="SaltBootstrap" dir=in protocol=TCP localport=445 action=allow
```

```
1 $CurrentVal = Get-NetFirewallRule -DisplayName SaltBootstrap
2
3 if ($CurrentVal.Enabled -eq "True") {
4     Disable-NetFirewallRule -DisplayName SaltBootstrap
5     Write-Output "changed=yes comment='Port 445 Disabled.'"
6 } Else {
7     Write-Output "changed=no comment='Port 445 Already Disabled.'"
8 }
```

# Salt Cloud - Map File

```
1 wpt-linux:  
2     - web01.webpagetest.example.com  
3     - web02.webpagetest.example.com  
4 wpt-windows:  
5     - win01.webpagetest.example.com  
6     - win02.webpagetest.example.com
```

# Pillar

```
1 webpagetest:
2   sitename: "webpagetest.example.com"
3   zipurl: "https://github.com/WPO-Foundation/webpagetest/releases/do"
4   zipsha: "sha256=19ee9df78205f99153c6fa80b6e6e98394cc680c4a9e13b31b
5   http: "apache2" # nginx or apache2
6   php: "php5" # php5 or php5-fpm
7   win:
8     user: "webpagetest"
9     pass: "changeme"
10    install_dir: 'C:\webpagetest'
11    temp_dir: 'C:\wpttemp'
12    zip_file: "webpagetest_2.15.zip"
13 packages:
14   - imagemagick
15   - libimage-exiftool-perl
16   - libjpeg-turbo-progs
17   - php5-curl
18   - php5-gd
19   - php5-sqlite
20   - php5-apcu
21   - python-software-properties
22   - unzip
```

# Pillar

```
23   phpvars:
24     upload_max_filesize: "12M"
25     post_max_size: "12M"
26     memory_limit: "512M"
27     fpm: "unix:/var/run/php5-fpm.sock"
28   settings:
29     product: "WebPageTest"
30     contact: "contact@domain.com"
31     maxruns: 9
32     allowPrivate: 0
33     key: "changeme" #Do not use an & in your key
34   locations:
35     - name: TestLocation
36       label: TestLabel
37       group: TestGroup
38       browsers: "Chrome,Firefox,IE"
39       drivers:
40         - wptdriver
41         - urlblast
42       default: True
```

# Powershell States

```
1 close-port-445:  
2   cmd.script:  
3     - source: salt://webpagetest/powershell/Set-ClosePort445.ps1  
4     - shell: powershell  
5     - stateful: True
```

---

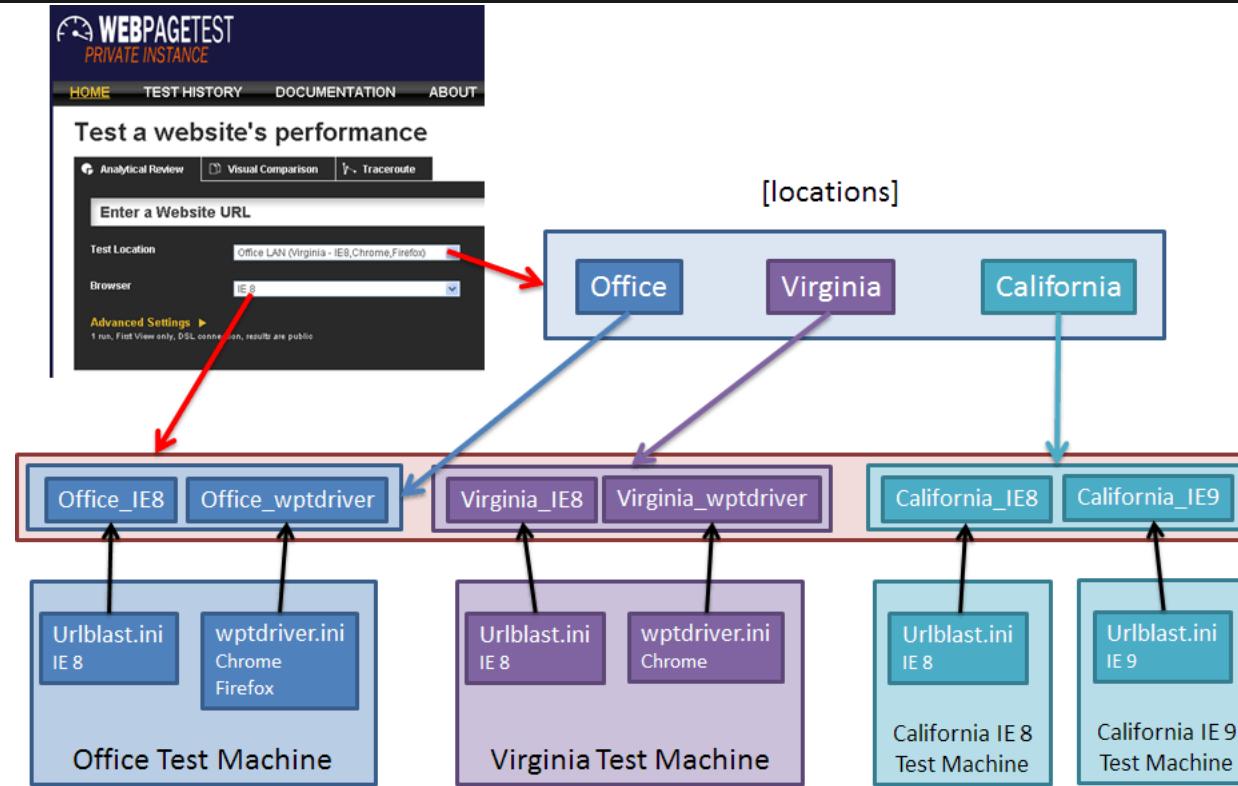
```
1 $CurrentVal = Get-NetFirewallRule -DisplayName SaltBootstrap  
2  
3 if ($CurrentVal.Enabled -eq "True") {  
4   Disable-NetFirewallRule -DisplayName SaltBootstrap  
5   Write-Output "changed=yes comment='Port 445 Disabled.'"  
6 } Else {  
7   Write-Output "changed=no comment='Port 445 Already Disabled.'"  
8 }
```

---

# WebPageTest Challenges



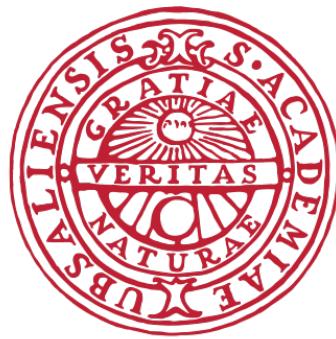
# Configuring Locations



# Configuring Locations

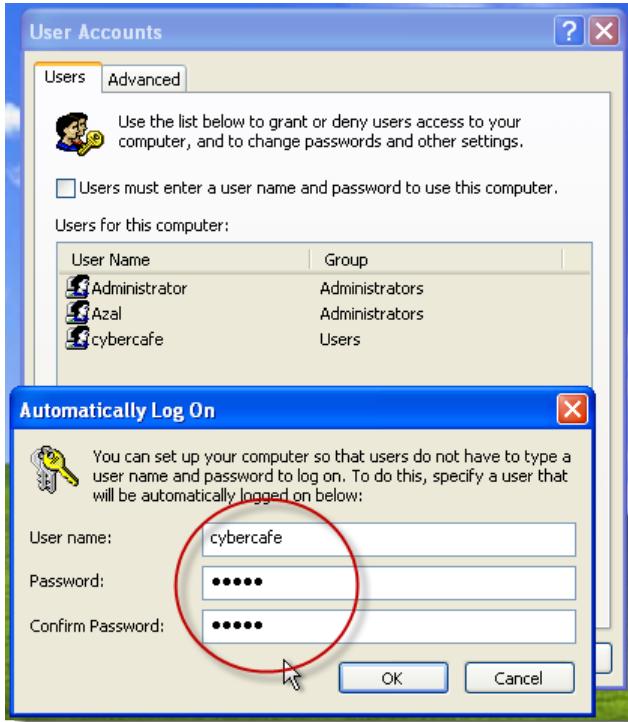
Pillar	Grains
webpagetest.locations.name	wpt_location
webpagetest.locations.label	wpt_label
webpagetest.locations.group	wpt_group
webpagetest.locations.browsers	wpt_browsers

# Xen + DummyNET Driver



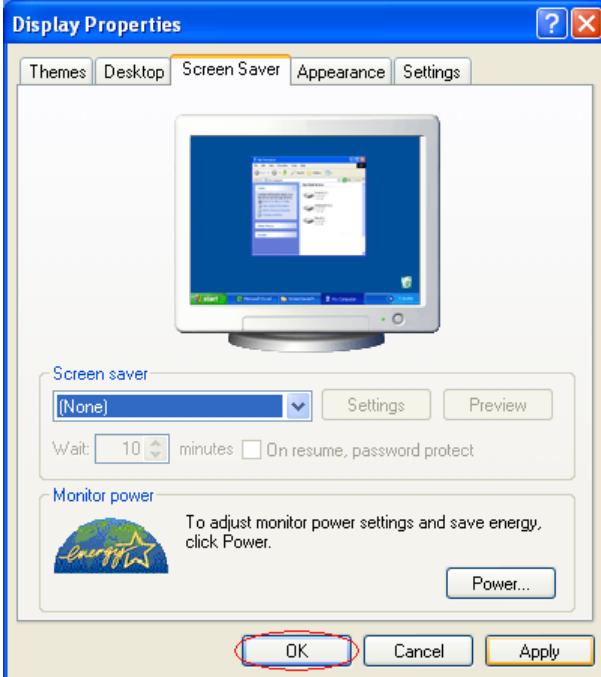
UPPSALA  
UNIVERSITET

# Auto Logon



```
1 $LogonPath = 'HKLM:\SOFTWARE\Microsoft\Windows NT\CurrentVersion\Winlogon'
2 $LastUser = 'HKEY_LOCAL_MACHINE\Software\Microsoft\Windows\CurrentVersion\Authentication\LogonUI'
3 $Domain = "{$grains.host}"
4 $Username = "{$pillar['webpagetest']['win']['user']}"
5 $Password = "{$pillar['webpagetest']['win']['pass']}"
6
7 $CurrentVal = Get-ItemProperty -Path $LogonPath -Name AutoAdminLogon
8
9 If ($CurrentVal.AutoAdminLogon -eq "1") {
10     $CurrentUser = Get-ItemProperty -Path $LogonPath -Name DefaultUserName
11     $CurrentPass = Get-ItemProperty -Path $LogonPath -Name DefaultPassword
12
13     If ($CurrentUser.DefaultUserName -ne $Username -Or $CurrentPass.DefaultPassword -ne $Password) {
14         Set-ItemProperty -Path $LogonPath -Name DefaultUserName -Value "$Username"
15         Set-ItemProperty -Path $LogonPath -Name DefaultPassword -Value "$Password"
16         Write-Output "changed=yes comment='Credentials Updated.'"
17     } Else {
18         Write-Output "changed=no comment='AutoLogon already enabled.'"
19     }
20 } Else {
21     Set-ItemProperty -Path $LogonPath -Name AutoAdminLogon -Value "1"
22     Set-ItemProperty -Path $LogonPath -Name DefaultDomainName -Value "$Domain"
23     New-ItemProperty -Path $LogonPath -Name DefaultUserName -Value "$Username"
24     New-ItemProperty -Path $LogonPath -Name DefaultPassword -Value "$Password"
25     New-ItemProperty -Path $LogonPath -Name DontDisplayLastUserName -Value 1
26     Set-ItemProperty -Path $LastUser -Name LastLoggedOnUser -Value "$Username"
27     Set-ItemProperty -Path $LogonPath -Name LastUsedUsername -Value "$Username"
28     Write-Output "changed=yes comment='AutoLogon enabled.'"
29 }
```

# Disable Screensavers



```
1 $Path = 'HKCU:\Control Panel\Desktop'  
2  
3 Try {  
4     $CurrentVal = Get-ItemProperty -Path $Path -Name ScreenSaveActive  
5     Write-Output $CurrentVal  
6 } Catch {  
7     $CurrentVal = False  
8 } Finally {  
9     if ($CurrentVal.ScreenSaveActive -ne 0) {  
10         Set-ItemProperty -Path $Path -Name ScreenSaveActive -Value 0  
11         Write-Output "changed=yes comment='Screensaver Disabled.'"  
12     } Else {  
13         Write-Output "changed=no comment='Screensaver Already Disabled.'"  
14     }  
15 }
```

# Disable Shutdown Tracker



```
1 $Path = 'HKLM:\Software\Microsoft\Windows\CurrentVersion\Reliability'  
2  
3 Try {  
4     $CurrentVal = Get-ItemProperty -Path $Path -Name ShutdownReasonUI  
5     Write-Output $CurrentVal  
6 } Catch {  
7     $CurrentVal = False  
8 } Finally {  
9     if ($CurrentValShutdownReasonUI -ne 0) {  
10         New-ItemProperty -Path $Path -Name ShutdownReasonUI -Value 0  
11         Write-Output "changed=yes comment='Shutdown Tracker Disabled.'"  
12     } Else {  
13         Write-Output "changed=no comment='Shutdown Tracker Already Disabled.'"  
14     }  
15 }
```

# IE Browser Plugin

The screenshot shows an Internet Explorer window displaying the MSN homepage (<http://tw.msn.com/>). The page includes the MSN logo, navigation links (首頁 | 新聞 | 圖片 | 影片), a Bing search bar, and various links for Hotmail, Messenger, and IE9. At the bottom of the page, there is a news feed and a red notification bar. A red arrow points to this notification bar, which contains the text: "The 'TmIEPlugInBHO Class' add-on from 'Trend Micro, Inc.' is ready for use." Below this text are two buttons: "Enable" and "Don't enable".

# Mobile Devices



# The Ampersand (&) Bug

&

# The Ampersand (&) Bug

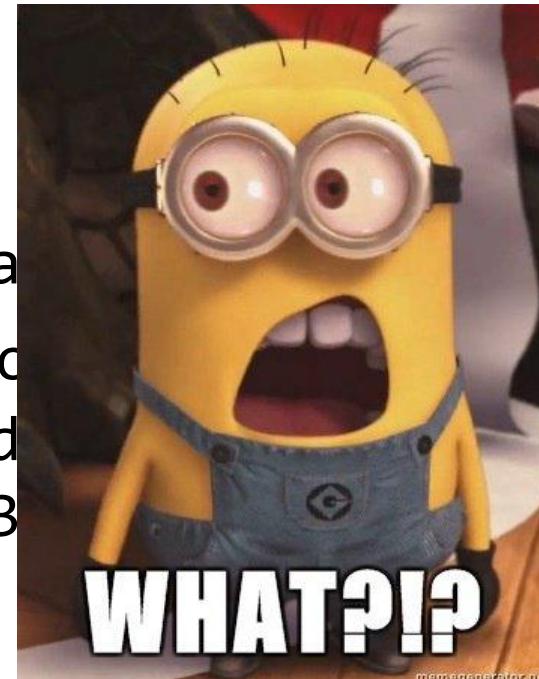
```
/work/getwork.php?  
shards=1&location=Virginia_wptdriver&key=secret1  
23&software=wpt&version=2.15.0.183  
&ver=183&pc=COMPUTERNAME&dns=69.20.0.164-  
69.20.0.196&freedisk=17.036&GPU=0
```

# The Ampersand (&) Bug

/work/getwork.php?  
shards=1&location=Virginia\_wptdriver&key=secret123&software=wpt&version=2.15.0.183  
&ver=183&pc=COMPUTERNAME&dns=69.20.0.164-  
69.20.0.196&freedisk=17.036&GPU=0

# The Ampersand (&) Bug

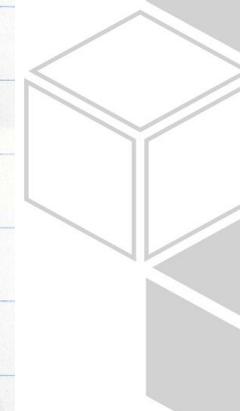
/work/getwork.php?  
shards=1&location=Virginia  
et123&software=wpt&version  
&ver=183&pc=COMPUTERNAME&d  
69.20.0.196&freedisk=17.03



# SaltStack Challenges



SALTSTACK

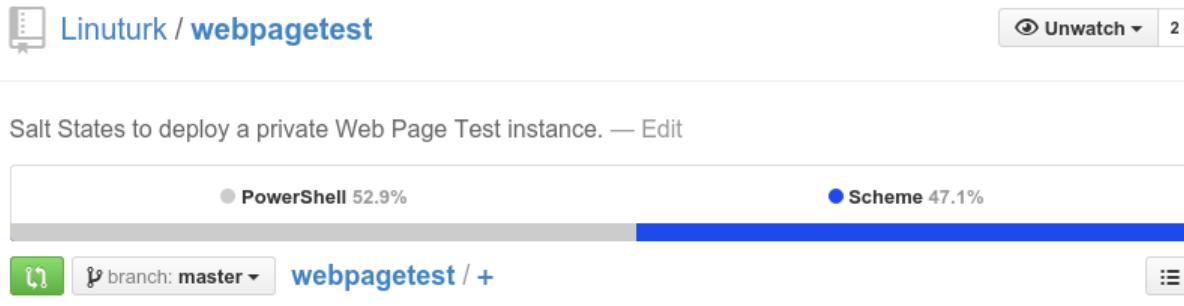


# Windows Salt-Cloud

Bootstrapping Windows with salt-cloud today is a weird experience:

- [Use Password from OpenStack API - PR14748](#)
- [Fingerprint Mismatch, Map File Broke - #14593](#)
- [Discussion on new bootstrap method - #15984](#)

# Windows State Modules



# Learning PowerShell



```
PS C:\> Get-ChildItem 'MediaCenter:\Music' -rec |  
    >>     Where { -not $_.PSIsContainer -and $_.Extension -match '\.mp3' } |  
    >>     Measure-Object -property length -sum -min -max -ave  
  
Count : 1307  
Average : 5491226.09563887  
Sum : 7172097857  
Maximum : 22985267  
Minimum : 3235  
Property : Length  
  
PS C:\> Get-WmiObject CIM_BIOSElement | select biosv*, man*, ser* | Format-List  
  
BIOSVersion : TOC CPL - 6040000, Ver 1.00PARTITBL  
Manufacturer : TOSHIBA  
SerialNumber : M621i16H  
  
PS C:\> (IwmSearcher){  
    >> SELECT * FROM CIM_Job  
    >> WHERE Priority > 1  
    >> '{0}'.get() | Format-Custom  
    >>  
class ManagementObject#root\cimv2\Win32_PrintJob  
<  
    Document = Monad Manifesto - Public  
    JobId = 6  
    JobStatus =  
    Owner = User  
    Priority = 42  
    Size = 1027088  
    Name = Epson Stylus COLOR 740 ESC/P 2, 6  
>  
  
PS C:\> $rssUrl = 'http://blogs.msdn.com/powershell/rss.aspx'  
PS C:\> $blog = [System.Net.WebClient]::DownloadString($rssUrl)  
PS C:\> $blog.rss.channel.item | select title -first 3  
  
title  
MMS: What's Coming In PowerShell V2  
PowerShell Presence at MMS  
MMS Talk: System Center Foundation Technologies  
  
PS C:\> $host.version.ToString().Insert(0, 'Windows PowerShell: ')  
Windows PowerShell: 1.0.0.0  
PS C:\>
```

# Try WebPageTest

Give WebPageTest a try using:



SALTSTACK

# Questions?

Slides at: [onitato.com](http://onitato.com)

States and PowerShell at:

[www.github.com/linuturk/webpagetest](https://www.github.com/linuturk/webpagetest)

