PowerShell Conference Asia

Securing PowerShell and defeat malware

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#psconfasia

SAPIEN

Microsoft

KEMP
APPLICATION DELIVERY

amazon web services™

About_jaap

- Dutch PowerShell User Group
- Blogging
  - PowerShell Magazine
  - JaapBrasser.com
- Slack
- Reddit
- GitHub
- PowerShell Gallery
- TechNet Forums/Gallery

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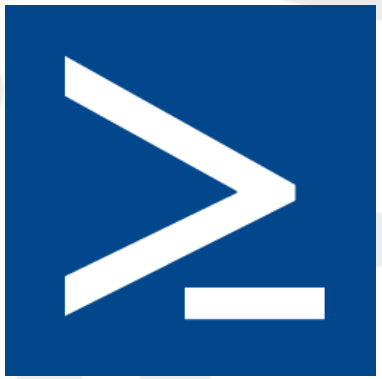
Agenda

- What is PowerShell security
- Example of PowerShell logging and limitations
- How to use PowerShell against real threats
- Example of utilizing PowerShell against cryptolockers
- How to secure your environment against cryptolockers
- What to expect in the future
- Questions and Answers

Why does malware love PowerShell

- Easy to automate
- Available by default on modern OS
- Access to .Net
- Now also on Linux & Mac
- Can execute C# sharp without compiler



What is PowerShell Security

- First and foremost:

  PowerShell Security is security

How to secure PowerShell

- Execution Policy (really)
- Using Constrained Remoting Endpoints
- Just enough administration
- Configure PowerShell logging

Demo – PowerShell Logging

```
PS C:\Users\JaapBrasser> $Files = Get-ChildItem -Path C:\Windows\ -Recurse
Get-ChildItem : Access to the path 'C:\Windows\appcompat\Programs' is denied.
At line:1 char:10
+ $Files = Get-ChildItem -Path C:\Windows\ -Recurse
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```

Demo Summary

- How to enable PowerShell logging
- What to look for when logging
- How to obscure the logs

Trojan infection on critical system

- Name of the Trojan
- Generic description of its capabilities
- List of potential infected files
- A VLAN to which the Trojan was most likely contained

Basic PowerShell cmdlets to resolve the threat

- Get-ADComputer

  List of computer names in a OU matching the naming convention
- Test-Connection

  Test if the computer is switched on
- Get-Item

  Get version information and size of the file

CryptoLockers / Ransomware

Demo – Start encrypting files

```
PS C:\Users\JaapBrasser> $Files = Get-ChildItem -Path C:\Windows\ -Recurse
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```

Demo Summary

- Showed the outline of a basic Cryptolocker virus

Demo – Find encrypted files and properties

```
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```

Demo Summary

- Use robocopy to find files that match crypto naming convention
- Filter the results with regular expressions
- Use this data to determine the scope of the damage

Demo – Secure your file server using PowerShell

```
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```

Demo Summary

- How to use FSRM to setup filtering rules
- Setup scripts to run when a rule triggers
  - Configure the correct security permissions

What to expect in the future

- More threats that incorporate PowerShell
- Bigger role for cloud based security

Don’t Forget!

- Fill in your survey – it’s how we do better!
- Don’t lose your badge! You need it for the Social Events
- Grab the Speakers for a chat – they all have time for you!
- Let everyone know what they are missing on Social Media

  #PowerShell

  #PSConfAsia

  Tweets (preferably with Pictures) win Prizes!!!!

Photos of Marina Bay Credit: Sebastian Szumigalski