

?? PowerShell ???19??23 ????????1??????????

PowerShell + BAT + (Task Scheduler) PowerShell Cmdlet BAT

1. ?? PowerShell ??

PowerShell

```
D:\temp\get_connection.ps1
```

BAT

```
$LogFile = "D:\temp\get_connection.log"

Add-Content $LogFile ""
Add-Content $LogFile "======"
Add-Content $LogFile "$(Get-Date -Format 'yyyy-MM-dd HH:mm:ss')"
```

```
Add-Content $LogFile "======"

Add-Content $LogFile ""
Add-Content $LogFile "[Get-NetTCPConnection | Measure-Object]"
Get-NetTCPConnection | Measure-Object | Out-String | Add-Content $LogFile

Add-Content $LogFile ""
Add-Content $LogFile "[Get-NetAdapterVmq]"
Get-NetAdapterVmq | Format-Table -AutoSize | Out-String | Add-Content $LogFile

Add-Content $LogFile ""
Add-Content $LogFile "[Get-NetAdapterStatistics]"
Get-NetAdapterStatistics | Format-Table -AutoSize | Out-String | Add-Content $LogFile

Add-Content $LogFile ""
Add-Content $LogFile "[Get-NetTCPConnection | Group-Object State]"
Get-NetTCPConnection | Group-Object State | Format-Table -AutoSize | Out-String | Add-Content
```

```
$LogFile
```

```
Add-Content $LogFile ""  
Add-Content $LogFile "[Network Interface Bytes Total/sec]"  
Get-Counter '\Network Interface(*)\Bytes Total/sec' |  
Select-Object -ExpandProperty CounterSamples |  
Format-Table InstanceName,CookedValue -AutoSize |  
Out-String | Add-Content $LogFile
```

```
Add-Content $LogFile ""  
Add-Content $LogFile "[Hyper-V Virtual Switch Bytes/sec]"  
Get-Counter '\Hyper-V Virtual Switch(*)\Bytes/sec' |  
Select-Object -ExpandProperty CounterSamples |  
Format-Table InstanceName,CookedValue -AutoSize |  
Out-String | Add-Content $LogFile
```

```
Add-Content $LogFile ""  
Add-Content $LogFile "[Network Interface Packets Sent/sec]"  
Get-Counter '\Network Interface(*)\Packets Sent/sec' |  
Select-Object -ExpandProperty CounterSamples |  
Format-Table InstanceName,CookedValue -AutoSize |  
Out-String | Add-Content $LogFile
```

```
Add-Content $LogFile ""  
Add-Content $LogFile "[Hyper-V Virtual Network Adapter Bytes/sec]"  
Get-Counter '\Hyper-V Virtual Network Adapter(*)\Bytes/sec' |  
Select-Object -ExpandProperty CounterSamples |  
Format-Table InstanceName,CookedValue -AutoSize |  
Out-String | Add-Content $LogFile
```

2. ?? BAT ?????

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```
D:\temp\get_connection.bat
```

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```
@echo off
```

```
powershell.exe -NoProfile -ExecutionPolicy Bypass -File "D:\temp\get_connection.ps1"
```

```
□□□
```

```
D:\temp\get_connection.bat
```

```
□□□
```

```
D:\temp\get_connection.log
```

```
□□□□□□
```

3. ???????

```
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```

```
□□□□□□
```

```
(Task Scheduler)
```

```
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```

```
??
```

```
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```

```
Get_Connection_Monitor
```

```
□□□□□□□□
```

```
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```

```
???
```

```
□□ 8 □□□□
```

```
□□
```

```
19:30
```

```
20:00
```

20:30
21:00
21:30
22:00
22:30
23:00

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D:\temp\get_connection.bat

4. PowerShell ????????????????

☐☐☐ PowerShell ☐☐☐

```
$action = New-ScheduledTaskAction `
-Execute "D:\temp\get_connection.bat"

$times = @(
"19:30",
"20:00",
"20:30",
"21:00",
"21:30",
"22:00",
"22:30",
"23:00"
)

foreach ($t in $times)
{
    $trigger = New-ScheduledTaskTrigger `
```

```

    -Daily `
    -At $t

Register-ScheduledTask `
    -TaskName ("GetConnection_" + $t.Replace(":", "")) `
    -Action $action `
    -Trigger $trigger `
    -RunLevel Highest `
    -Force
}

```

5. ????? TCP ?????

????? Hyper-V + NAT + 70????????????

```
netstat -ano | find /c "ESTABLISHED"
```

```
Get-NetTCPSetting
```

```
Get-NetOffloadGlobalSetting
```

```
Get-NetAdapterRss
```

```
Get-NetAdapterVmq
```

```
Get-VMNetworkAdapter -ManagementOS
```

????? D:\temp\get_connection.ps1?????

```

$LogFile = "D:\temp\get_connection.log"

Add-Content $LogFile ""
Add-Content $LogFile "======"
Add-Content $LogFile "$(Get-Date -Format 'yyyy-MM-dd HH:mm:ss')"
Add-Content $LogFile "======"

# TCP????
Add-Content $LogFile ""

```

```

Add-Content $LogFile "[Get-NetTCPConnection | Measure-Object]"
Get-NetTCPConnection | Measure-Object | Out-String | Add-Content $LogFile

# TCP
Add-Content $LogFile ""
Add-Content $LogFile "[Get-NetTCPConnection | Group-Object State]"
Get-NetTCPConnection | Group-Object State |
Sort-Object Count -Descending |
Format-Table Count,Name -AutoSize |
Out-String | Add-Content $LogFile

# ESTABLISHED
Add-Content $LogFile ""
Add-Content $LogFile "[ESTABLISHED Count]"
(netstat -ano | findstr ESTABLISHED | Measure-Object -Line).Lines |
Out-String | Add-Content $LogFile

# VMQ
Add-Content $LogFile ""
Add-Content $LogFile "[Get-NetAdapterVmq]"
Get-NetAdapterVmq |
Format-Table -AutoSize |
Out-String | Add-Content $LogFile

# RSS
Add-Content $LogFile ""
Add-Content $LogFile "[Get-NetAdapterRss]"
Get-NetAdapterRss |
Format-Table -AutoSize |
Out-String | Add-Content $LogFile

#
Add-Content $LogFile ""
Add-Content $LogFile "[Get-NetAdapterStatistics]"
Get-NetAdapterStatistics |
Format-Table -AutoSize |
Out-String | Add-Content $LogFile

# TCP
Add-Content $LogFile ""

```

```

Add-Content $LogFile "[Get-NetTCPSetting]"
Get-NetTCPSetting |
Format-Table -AutoSize |
Out-String | Add-Content $LogFile

# 网络配置
Add-Content $LogFile ""
Add-Content $LogFile "[Get-NetOffloadGlobalSetting]"
Get-NetOffloadGlobalSetting |
Format-List |
Out-String | Add-Content $LogFile

# Hyper-V网络配置
Add-Content $LogFile ""
Add-Content $LogFile "[Get-VMNetworkAdapter -ManagementOS]"
try {
    Get-VMNetworkAdapter -ManagementOS |
    Format-Table -AutoSize |
    Out-String | Add-Content $LogFile
}
catch {
    Add-Content $LogFile "Hyper-V module not available."
}

# 网络流量
Add-Content $LogFile ""
Add-Content $LogFile "[Network Interface Bytes Total/sec]"
Get-Counter '\Network Interface(*)\Bytes Total/sec' |
Select-Object -ExpandProperty CounterSamples |
Format-Table InstanceName,CookedValue -AutoSize |
Out-String | Add-Content $LogFile

# 网络包发送
Add-Content $LogFile ""
Add-Content $LogFile "[Network Interface Packets Sent/sec]"
Get-Counter '\Network Interface(*)\Packets Sent/sec' |
Select-Object -ExpandProperty CounterSamples |
Format-Table InstanceName,CookedValue -AutoSize |
Out-String | Add-Content $LogFile

```

```

Add-Content $LogFile ""
Add-Content $LogFile "[Network Interface Packets Received/sec]"
Get-Counter '\Network Interface(*)\Packets Received/sec' |
Select-Object -ExpandProperty CounterSamples |
Format-Table InstanceName,CookedValue -AutoSize |
Out-String | Add-Content $LogFile

# Hyper-V Virtual Switch
Add-Content $LogFile ""
Add-Content $LogFile "[Hyper-V Virtual Switch Bytes/sec]"
Get-Counter '\Hyper-V Virtual Switch(*)\Bytes/sec' |
Select-Object -ExpandProperty CounterSamples |
Format-Table InstanceName,CookedValue -AutoSize |
Out-String | Add-Content $LogFile

# Hyper-V Virtual Adapter
Add-Content $LogFile ""
Add-Content $LogFile "[Hyper-V Virtual Network Adapter(*)\Bytes/sec]"
Get-Counter '\Hyper-V Virtual Network Adapter(*)\Bytes/sec' |
Select-Object -ExpandProperty CounterSamples |
Format-Table InstanceName,CookedValue -AutoSize |
Out-String | Add-Content $LogFile

# CPU
Add-Content $LogFile ""
Add-Content $LogFile "[CPU]"
Get-Counter '\Processor(*)\% Processor Time' |
Select-Object -ExpandProperty CounterSamples |
Format-Table InstanceName,CookedValue -AutoSize |
Out-String | Add-Content $LogFile

# 
Add-Content $LogFile ""
Add-Content $LogFile "[Network Output Queue Length]"
Get-Counter '\Network Interface(*)\Output Queue Length' |
Select-Object -ExpandProperty CounterSamples |
Format-Table InstanceName,CookedValue -AutoSize |
Out-String | Add-Content $LogFile

# Hyper-V VM Switch

```

```
Add-Content $LogFile ""
Add-Content $LogFile "[Hyper-V Switch Packets/sec]"
try {
    Get-Counter '\Hyper-V Virtual Switch(*)\Packets/sec' |
    Select-Object -ExpandProperty CounterSamples |
    Format-Table InstanceName,CookedValue -AutoSize |
    Out-String | Add-Content $LogFile
}
catch {
    Add-Content $LogFile "Counter not available."
}

Add-Content $LogFile ""
Add-Content $LogFile "END"
```

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Hyper-V □ 70 □ NAT □□□□□□□□

RSS/VMQ □□□□□□□□

Revision #2

Created 5 June 2026 09:58:29 by Admin

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