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Finding Needles: Better Event Log Management with PowerShell

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Learning Architect

Level: Intermediate

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PS C:\> whoami

- Veteran IT Pro
- Microsoft MVP
- Author
- Teacher
- https://jdhitsolutions.github.io

Microsoft MVP Most Valuable Professional

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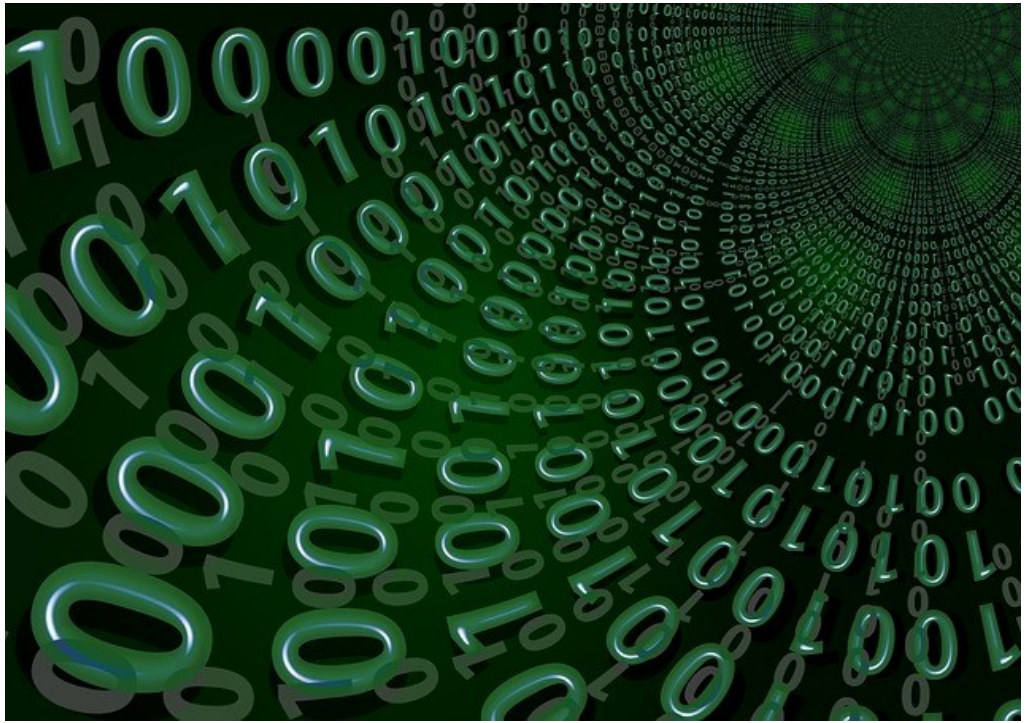
Eternal Event Logs

- Event log management is critical
  - Security
  - Availability
  - Configuration
  - Performance
- Use management tools where available
- Build your own with PowerShell



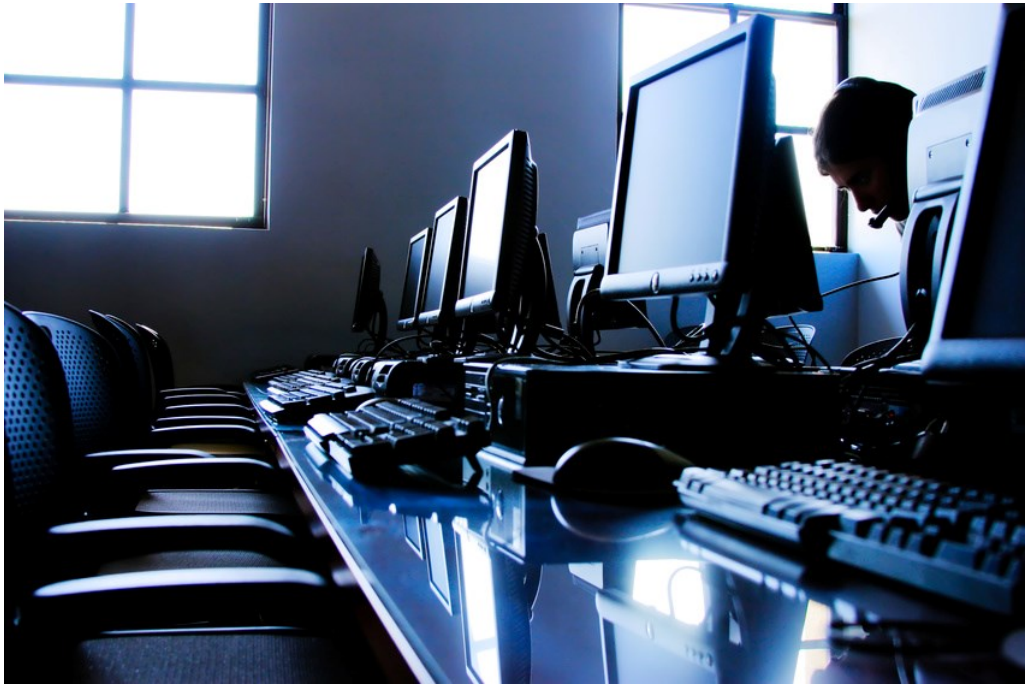
Legacy Management

```
PS C:\> Get-Eventlog system -EntryType Error -Newest 10

  Index Time          EntryType   Source                 InstanceID Message
  ----- ----          ---------   ------                 ---------- -------
   4230 Oct 08 07:19  Error       Microsoft-Windows...         1129 The processing of Group Policy failed because o...
   4223 Oct 08 07:19  Error       Microsoft-Windows...         1129 The processing of Group Policy failed because o...
   4220 Oct 08 07:19  Error       NETLOGON                     5719 This computer was not able to set up a secure s...
   4173 Oct 08 07:19  Error       EventLog                2147489656 The previous system shutdown at 6:24:40 AM on  ...
   3566 Sep 28 00:22  Error       Service Control M...    3221232506 The OpenSSH SSH Server service terminated unexp...
   3537 Sep 27 12:51  Error       Microsoft-Windows...           20 Installation Failure: Windows failed to install...
   3532 Sep 27 12:47  Error       Microsoft-Windows...           20 Installation Failure: Windows failed to install...
   3441 Sep 27 12:35  Error       Microsoft-Windows...         1129 The processing of Group Policy failed because o...
   3436 Sep 27 12:35  Error       Microsoft-Windows...         1129 The processing of Group Policy failed because o...
   3433 Sep 27 12:35  Error       NETLOGON                     5719 This computer was not able to set up a secure s...
```

Get-EventLog

- Limited to classic event logs
- Uses legacy protocols
- Not an option in PowerShell 7
- Consider it deprecated
  - Win32_NTEventLogFile



```
NAME
    Get-WinEvent

SYNOPSIS
    Gets events from event logs and event tracing log files on local and remote computers.


SYNTAX
    Get-WinEvent [[-LogName] <System.String[]>] [-ComputerName <System.String>] [-Credential
    <System.Management.Automation.PSCredential>] [-FilterXPath <System.String>] [-Force] [-MaxEvents <System.Int64>]
    [-Oldest] [<CommonParameters>]

    Get-WinEvent [-ListLog] <System.String[]> [-ComputerName <System.String>] [-Credential
    <System.Management.Automation.PSCredential>] [-Force] [<CommonParameters>]

    Get-WinEvent [-ListProvider] <System.String[]> [-ComputerName <System.String>] [-Credential
    <System.Management.Automation.PSCredential>] [<CommonParameters>]

    Get-WinEvent [-ProviderName] <System.String[]> [-ComputerName <System.String>] [-Credential
    <System.Management.Automation.PSCredential>] [-FilterXPath <System.String>] [-Force] [-MaxEvents <System.Int64>]
    [-Oldest] [<CommonParameters>]

    Get-WinEvent [-FilterHashtable] <System.Collections.Hashtable[]> [-ComputerName <System.String>] [-Credential
    <System.Management.Automation.PSCredential>] [-Force] [-MaxEvents <System.Int64>] [-Oldest] [<CommonParameters>]

    Get-WinEvent [-FilterXml] <System.Xml.XmlDocument> [-ComputerName <System.String>] [-Credential
    <System.Management.Automation.PSCredential>] [-MaxEvents <System.Int64>] [-Oldest] [<CommonParameters>]

    Get-WinEvent [-Path] <System.String[]> [-Credential <System.Management.Automation.PSCredential>] [-FilterXPath
    <System.String>] [-MaxEvents <System.Int64>] [-Oldest] [<CommonParameters>]
```

Show Me

https://github.com/jdhitsolutions/Techmentor2023-EventLogMgmt

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Questions and Answers