

Choose Two System Administration Tool

Research one of the following popular system administration tools or choose a similar tool:

- Ansible
- Nagios
- Zabbix
- Puppet
- Docker
- Windows PowerShell

Using reliable sources, answer the following questions about your chosen tool:

1. **What is the tool used for?**

Describe its primary functions in system administration.

- **Windows PowerShell** – its main purpose is task automation and configuration management. It helps the user to automate and solve administration tasks faster.
- **Process Hacker** – it is a powerful tool used for real-time monitoring of running processes, malware detection and analysis, and customization and compatibility.

2. **What are its main features?**

List three key features or capabilities that make it valuable to system administrators.

Windows Powershell

- o Command-line shell – unlike other shells Powershell accepts and returns .NET objects.
- o Configuration management – it enables you to manage your enterprise infrastructure with configuration as code.
- o Automation platform – it enables an ecosystem to deploy and manage technology you work with such as Azure, SQL, AWS, etc.

Process Hacker

- o Detailed process information – shows in-depth details about running processes ex. Memory usage.
- o Advanced termination tools – users can terminate even protected or stubborn processes. It can be beneficial against malware and unresponsive apps.
- o Memory editing – allows viewing and modifying a process memory it can be helpful for debugging.

3. **What type of organizations or environments use this tool?**

Give examples of scenarios or types of businesses that benefit from this tool.

Windows Powershell

Data centers –for managing servers

Cybersecurity teams – used for security tasks like auditing and monitoring since it enables access to deep system data and fast response

Process hacker

Cybersecurity teams – used to detect suspicious processes, inspect hidden malware, and manage active system resources.

IT support and admins – used to monitor and troubleshoot performance issues, manage processes, and inspect hidden malware.

4. **How does it improve system administration tasks?**

Explain how the tool helps manage or automate tasks within IT environments.

Windows Powershell - it allows admins to automate repetitive tasks, saving time and reduce human errors. It also provides a powerful scripting language for managing systems.

Process Hacker - it gives admins immediate access to process data, memory usage, and system resources. Also, it allows them to manage and terminate unresponsive and malicious processes, and monitor, and debug software issues.

Find an Example of Usage

Locate an example (e.g., case study, company blog, or review) where this tool was implemented. Summarize the example and describe the impact it had on the organization.

A large government organization struggled with managing user accounts in active directory such as creating new accounts, removing accounts for former employees, and updating user information which needs to be done efficiently. the organization used Windows Powershell to automate these tasks such as adding new accounts, removing inactive accounts, and keeping user details up-to-date. This automation saved time, reduced mistakes, and helped keep the system secure and organized, allowing the IT team to focus on other important tasks.

Reflection

Reflect on how learning about tools like this can help you in a career in system administration. How do you think understanding these tools will make your work more efficient or impactful?

By learning tools like Windows Powershell, I can build skills to make my work efficient. Tools like Powershell can help me automate repetitive tasks, so I don't have to do them manually every time. It helps me to manage many systems at once with a single command, making it easier to keep everything running smoothly. It saves time, reduces errors, and helps me solve issues quickly.

Email your answer in pdf format to bsit4@sscr.edu

Links:

[What is PowerShell? - PowerShell | Microsoft Learn](#)

[Process Hacker - A free, powerful, multi-purpose tool that helps you monitor system resources, debug software and detect malware](#)

<https://www.varonis.com/blog/process-hacker>

<https://www.ninjaone.com/blog/how-to-automate-tasks-with-powershell/>