

10 ways to automate Windows with Red Hat automation

It is not uncommon for organizations to have a variety of technology stacks within their enterprise, with different applications running on different operating systems, or a multitier application, where the front end runs on Linux® while the back end runs on Microsoft Windows. Automating each system and application with different tools can be complicated and inefficient, leading to solution sprawl and potential workflow bottlenecks.

With Red Hat® Ansible® Automation Platform, IT organizations can automate all their systems, including both Microsoft Windows and Linux distributions, such as Red Hat Enterprise Linux. Using [Ansible Content Collections](#) for Microsoft Windows and Microsoft Active Directory (AD), IT teams can automate the entire application life cycle through a single, robust platform. Teams can save money by consolidating disparate solutions, eliminating static operations, and aligning teams around a versatile solution with a common user interface (UI) without an advanced Linux skillset. This checklist outlines 10 ways you can use these collections to automate your Windows systems.

1 Use PowerShell scripts

Ansible Automation Platform allows you to capitalize on your existing investment in PowerShell by providing orchestration and extension to broader, more modern, automation processes. Use PowerShell scripts as your starting point while you advance your automation to the next level.

Ansible Automation Platform allows you to automate new Windows systems, including all .NET and Desired State Configuration (DSC) functions, without installing another scripting language.

2 Maintain Microsoft ADs

Red Hat Ansible Certified Content Collection helps IT teams streamline and orchestrate a variety of administrative tasks through the automation controller UI. Look up host information for debugging Lightweight Directory Access Protocol (LDAP) connections, checking for the existence of a Windows domain, and manage AD group objects, users, and domains.

3 Install and maintain applications

Windows uses the Microsoft Store for application distribution and maintenance. However, the store does not provide an integrated package management system for automation. Ansible Automation Platform provides a module for automating basic package management in Windows and also integrates with Chocolatey—software management automation for Windows—to provide automated idempotent package management.

4 Manage system reboots

Many standard IT functions require or result in reboots in Windows. Reboots can be problematic when automating tasks, as a particular system effectively disappears during a reboot, interrupting any automated tasks. Ansible Automation Platform provides a way to manage systems throughout reboot cycles to ensure all automation tasks are performed regardless of how many reboots are required.

5 Apply Windows updates

Update management is an ongoing responsibility that can distract users from more strategic priorities. Many IT teams use Microsoft Endpoint Configuration Manager (MECM) (formerly System Center Configuration Manager) to manage these updates across their systems. However, MECM can be unreliable for performing automated updates, particularly when reboots are involved, making it more difficult to meet maintenance windows. Ansible Automation Platform lets you perform basic, synchronous updates to ensure continuous performance and operations.

6 Configure Internet Information Services

Internet Information Services (IIS) is an extensible web server for Windows. Ansible Automation Platform provides basic automation modules for IIS, including setting up a website, web applications, application pools, and virtual directories.

7 Customize the Windows registry

Changing Windows registry values manually can be a time-consuming and error-prone task, even for experienced users. Ansible Automation Platform includes built-in capabilities for managing individual key-value pairs in an idempotent fashion. You can also create registry templates and automatically apply those templates to groups of Windows systems more efficiently.

8 Manage Windows services

Ansible Automation Platform includes a module for automating Windows services, including WinRM, IIS, and firewalls. You can also create and manage Windows services as part of a larger software deployment.

9 Tackle domain management

Windows domains make testing new software difficult, as all test systems must be added to a domain. With Ansible Automation Platform, you can automate basic domain and domain user management using ephemeral machines to simplify operations. You can also automatically create temporary domains, add test systems, perform tests, and tear everything down quickly. In addition, the Active Directory collection allows for managing domain controllers and domain objects.

10 Maintain access control lists

Security is a constant concern for IT teams. Windows uses access control lists (ACLs) to specify access rights for users, groups, and tasks. Configuring ACLs correctly is critical to protecting your business from security and compliance risks. Ansible Automation Platform makes it simpler to configure and understand your ACLs using clear, human-readable code to set up users and groups, assign rights, and define inheritance behaviors.

Customer success highlight

Siemens, a global technology company, deployed Ansible Automation Platform to simplify and better automate its Windows-based public key infrastructure (PKI) environment. Some benefits realized include:

- ▶ Optimized Ansible for Windows-based security environment.
- ▶ Improved IT efficiency by automating management tasks.
- ▶ Enhanced in-house Ansible expertise with dedicated, expert consulting and training.

Read the complete [case study](#)¹ to learn more about Siemens' success.

¹ Red Hat e-book. "Simplify IT infrastructure with automation." 22 Dec. 2022.

“The role of the typical administrator opening a console, connecting to a server, and starting to configure will disappear in the coming years. It’ll be replaced by someone creating scripts in Ansible that are checked in and implemented automatically. Instead of patching servers, we’ll spin up a new one with the updates and applications we need.”

Rufus Buschart
Head of PKI, Siemens

Discover more

Learn more about automating Microsoft Windows and more at ansible.com/windows.

Learn more

Take a training course: [Microsoft Windows Automation with Red Hat Ansible](#).



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