Red Hat Ansible Automation Platform

A beginner's guide

Red Hat
Ansible Automation
Platform

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Introduction

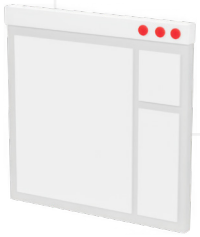
IT automation is mission critical.

Modern enterprises struggle to keep pace with a rapidly changing technology landscape while simplifying operations and extracting more return on investment (ROI) from existing technology investments.

In order to meet customer demands, remain competitive, and increase revenue, these enterprises need to free up technology teams to focus on innovation, while maintaining security and compliance and supporting IT operations to accelerate delivery of services to market.

IT automation is essential for enterprises to achieve meaningful efficiencies that maintain safeguards and create capacity to deliver innovative services and solutions, but it's most effective when implemented broadly and strategically. A task-based approach to automation is no longer effective or sustainable. It can increase costs, result in duplicate efforts, and build barriers between functions and departments.

A holistic automation strategy that integrates people, processes, and technology across the entire IT state can unlock true IT transformation. When automation becomes a strategic pillar, enterprises can achieve:



Enhanced collaboration
When teams are empowered and aligned across regions, they can better collaborate to develop solutions and services.

Maximized productivity
New efficiencies position teams to accomplish more in less time.

Proactive operations
Event-driven automation helps prevent issues, mitigate risk, and apply solutions before they affect operations.

Greater agility
With less time spent on manual, low-value tasks, teams can better meet evolving business needs and market demands.

> Automation generates substantial day-to-day efficiencies … Development teams benefit from greatly reducing the friction associated with provisioning and deploying the IT resources they require. Employees benefit from higher-quality applications that experience fewer outages.[1]
>
> **Jevin Jensen**
> Research Vice President, Infrastructure and Operations, IDC

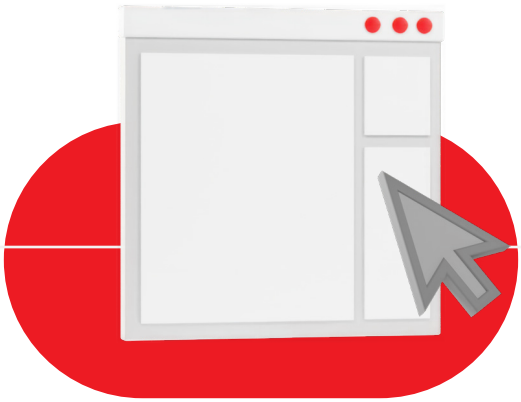
The right enterprise automation solution can improve the way IT functions in your organization while unifying teams and processes, and ultimately, transforming the way you deliver IT. So what does it take to bring IT automation to your organization?

Red Hat® Ansible® Automation Platform is a strategic, flexible, and scalable automation solution that works across your IT environment and meets you where you are in your automation journey. A trusted solution for enterprises, it provides a unified, highly capable platform that allows you to build and operate intelligent automation workflows across hybrid environments.

Use this e-book as your guide to Ansible Automation Platform, its benefits, and information to help you make the right decisions for your organization's automation practice.

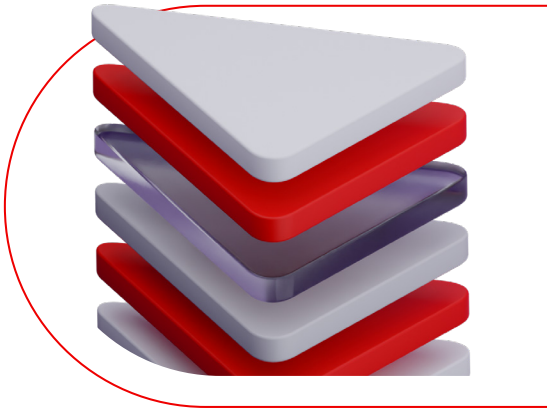
If you have used Ansible Automation Platform before and want to learn about the benefits of extending automation across your organization or migrating from an earlier version to the latest offering, jump to Key features of Red Hat Ansible Automation Platform.

If you're brand new to Ansible Automation Platform, keep reading to find out how automation can help your organization succeed. Let's get this journey started.



[1] IDC White Paper, sponsored by Red Hat. "The Business Value of Red Hat Ansible Automation Platform." Document #US51839824, Mar. 2024.

An overview of Red Hat Ansible Automation Platform



To understand Ansible Automation Platform, you need to understand Red Hat. For more than 30 years, Red Hat has delivered open source solutions hardened for stability that help organizations work across platforms and environments and address enterprise IT challenges.

Red Hat has a long history of participating in open source community projects, and the work around Ansible is no exception. A vibrant community contributes to the Ansible project, extending the technology into a stronger, more flexible solution and helping expand its ability to support enterprise ecosystems. Red Hat is committed to helping the community thrive.

Ansible Automation Platform is the enterprise-ready evolution of the original Ansible project—backed by Red Hat to help organizations manage growing complexity across hybrid and multicloud environments, while providing the flexibility to adapt to future IT challenges.

According to research from IDC, customers using Ansible Automation Platform to support business needs and to improve IT and application development operations could see a 3-year ROI of 668% with an 8-month payback on investment.[1]

Want to find out more about how to champion IT automation across your organization?

Read the IT executive's guide to automation.

Based on interviews with Ansible Automation Platform users, the report also found that organizations could benefit from positive effects on:[1]

Reliability:

61%

reduction in unplanned downtime.

27%

more efficient IT security teams.

IT staff:

38%

more efficient network infrastructure management teams.

36%

more productive development teams.

DevOps efficiencies by activity:

38%

improvement in provisioning.

34%

improvement in configuring.

27%

improvement in securing.

[1] IDC White Paper, sponsored by Red Hat. "The Business Value of Red Hat Ansible Automation Platform." Document #US51839824, Mar. 2024.

Organizations around the globe, such as Northeast Georgia Health System, Ensono, and Southwest Airlines, are finding similar business benefits using Ansible Automation Platform. From improving efficiencies and delivering digital services faster to freeing up critical resources to focus on higher-value projects, these organizations are recognizing the advantage of taking a holistic automation approach.

> Achieving zero unplanned downtime with Red Hat Ansible Automation Platform is a huge win.
>
> **Jameson Pugh**
> System Administrator, Northeast Georgia Health System[2]

See how Ansible Automation Platform helps organizations adopt a culture of collaborative automation.

Watch the video.

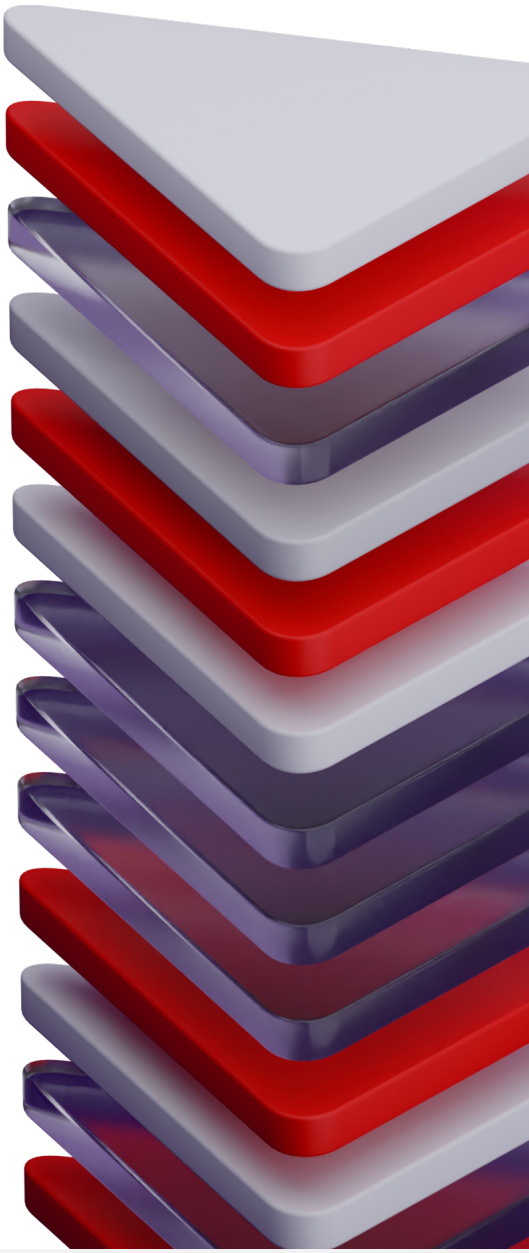
Find out how Ansible Automation Platform can bring tangible business benefits to your organization by reading The business value of Red Hat Ansible Automation Platform e-book.

> The speed and scale we've gained in such a short time have made [Ansible Automation Platform] a core part of how we operate going forward.
>
> **Tim Beerman**
> PhD, Chief Technology Officer, Ensono[3]

> Automation is mission critical at Southwest. Ansible Automation Platform is crucial as we continue our automation journey.
>
> **Carlos Tapia**
> Senior Systems Engineer, Southwest Airlines[4]

[2] Red Hat case study. "Northeast Georgia Health System improves uptime for Epic EHR," 4 Dec. 2024.
[3] Red Hat press release "Ensono Accelerates Innovation and Efficiency with Red Hat Ansible Automation Platform," 20 May 2025.
[4] Red Hat case study. "Southwest Airlines is expanding its automation use cases," 2 May 2024.

3 advantages of implementing Ansible Automation Platform in your organization:



1. Stronger momentum

It can be deployed anywhere and is compatible with most technology stacks, meaning you can automate what you need and where you need, and scale your automation strategically.

2. Improved resilience

You can apply automation to critical workloads with confidence, knowing Ansible Automation Platform is designed specifically for enterprise use and is backed by the highest standards for performance, security, and compliance.

3. Greater efficiency

Ansible Automation Platform offers features that simplify automation adoption, creation, and maintenance, so you can empower teams and scale automation across your organization, unlocking its full potential.

Learn more about the value of the Ansible Automation Platform.

Watch the video.

Key features of Red Hat Ansible Automation Platform

Whether you want to automate applications, networks, containers, security, cloud infrastructure, or all of the above, Ansible Automation Platform can help you create, execute, and manage automation—all from a single place.

1.

Ansible Automation Platform uses playbooks in easy-to-understand YAML syntax

Ansible Playbooks are regularly used to automate administration functions, such as orchestration, configuration, management, and deployment. A playbook is written in the YAML syntax and contains 1 or more plays, which are used to define a web service or an application. Each play within a playbook can run 1 or more tasks, and each task invokes an Ansible module, which are used to accomplish automation tasks in Ansible Automation Platform.

The YAML syntax comes in plain text, human-readable language, benefits from source control management, and can be used in conjunction with other programming languages, such as Ruby, Python, or Bash. Because Ansible Automation Platform uses YAML, users who don't write programming language code can automate infrastructure with confidence.

2.

Ansible Automation Platform is agentless

Among the most powerful and unique features of Ansible Automation Platform is the fact that it's agentless, which means that you don't need to install an agent on any machines you are trying to manage. This feature makes Ansible Automation Platform extremely scalable, as it can rapidly manage multiple machines or systems simultaneously.

3.

Ansible Automation Platform is enhanced with gen AI capabilities

Red Hat Ansible Lightspeed is Ansible Automation Platform's integrated gen AI service that empowers automation teams to work smarter and deploy solutions in less time. The service helps boost IT productivity, address skills gaps, and eliminates onboarding bottlenecks so automators at every level can respond to the complex demands of IT more efficiently.

4.

Ansible Automation Platform is built for the hybrid cloud

As hybrid and multicloud computing models continue to expand, IT organizations need automation platforms that can bridge from traditional systems to modern services to the far edge of the network.

To make your automation projects highly portable and scalable, Ansible Automation Platform includes automation execution environments. Execution environments help create self-contained automation that packages all dependencies needed to build, run, and manage automation across hybrid and multicloud infrastructure and to the edge.

Whether you're modernizing and moving workloads to the cloud, implementing DevSecOps, or finding new ways to manage a growing network of edge devices, Ansible Automation Platform is able to fulfill diverse needs across multiple processes. Ansible Automation Platform is now available directly through several of the leading hyperscalers' marketplaces, making it even simpler to start automating across your cloud environments and efficiently integrate with the cloud services you are already using.

5.

Ansible Automation Platform features self-healing infrastructure

Event-Driven Ansible, part of Ansible Automation Platform, is an event-driven automation tool that can automatically respond to routine tasks and IT service management (ITSM) actions as needed, as well as to changing conditions.

Event-driven automation works by allowing for a predefined and automated response when a certain type of event occurs. For example, in a typical IT operation, a system outage can send an alert that automatically triggers a specific action like logging a trouble ticket. In a similar way, event-driven automation can also help teams respond to a variety of additional Day 2 operational needs.

By offering a proactive approach to IT automation, Event-Driven Ansible frees up teams to do critical work and reduce manual toil, minimizing human errors often caused by high-volume repetitive tasks. It can help your business increase resilience, responsiveness, and efficiency.

6.

Ansible Automation Platform is built for resilience and consistency

From role-based access controls (RBAC) that allow administrators to assign permissions, privileges, and roles to users, to encryption, audit trails, and inventory controls, Ansible Automation Platform has the tools necessary to keep your organization compliant and aligned with service level agreements (SLAs).

It follows a Policy as Code (PaC) approach, providing policy enforcement features that safeguard and set boundaries around automation before it runs to establish confidence and trust.

A unified automation platform for your entire IT organization

Across organizations, IT operations (IT Ops) teams vary in their size, responsibilities, and team roles. They need to deliver outcomes autonomously, and at other times, in coordination and collaboration with other teams from across the organization.

Ansible Automation Platform is designed to help set up your entire IT organization for success by giving them the automation tools they need for their specific roles while providing a unified and supported enterprise-wide solution that works across the automation lifecycle. Here's how Ansible Automation Platform can support specific IT roles at each phase of the automation journey:

Ansible Automation Platform is available through many of the leading hyperscalers' marketplaces, making it even easier to adopt automation across your public and hybrid cloud environments.

Create

Developers, automation engineers, domain experts

The create phase is focused on efficiently developing, testing, and building automation content. Ansible Automation Platform supercharges the ability of developers, automation engineers, and domain experts to create and deploy automation content, regardless of their automation skill level. They benefit from tools and features such as:

- **Ansible Lightspeed**, a gen AI tool that offers coding assistance to help automation engineers and developers quickly generate Ansible code for single automation tasks, multiple tasks, or entire Ansible playbooks and roles.
- **Ansible development tools** and **Ansible plug-ins for Red Hat Developer Hub**, which streamline content creation and ensure code integrity to help teams build, test, and deploy content consistently within an integrated developer environment.
- **Ansible Content Collections**, which provide integration with solutions from Red Hat and more than 70 industry-leading partners to help teams get up and running with automation in less time.

Key tools

- Automation execution environments
- Ansible development tools
- Ansible plug-ins for Red Hat Developer Hub
- Automation controller
- Automated Policy as Code (PaC)
- Ansible Lightspeed
- Ansible Content Collections
- Automation analytics and Red Hat Insights
- Automation mesh
- Event-Driven Ansible

Manage

Platform engineers, system administrators (sysadmins), network administrators, site reliability engineers (SREs)

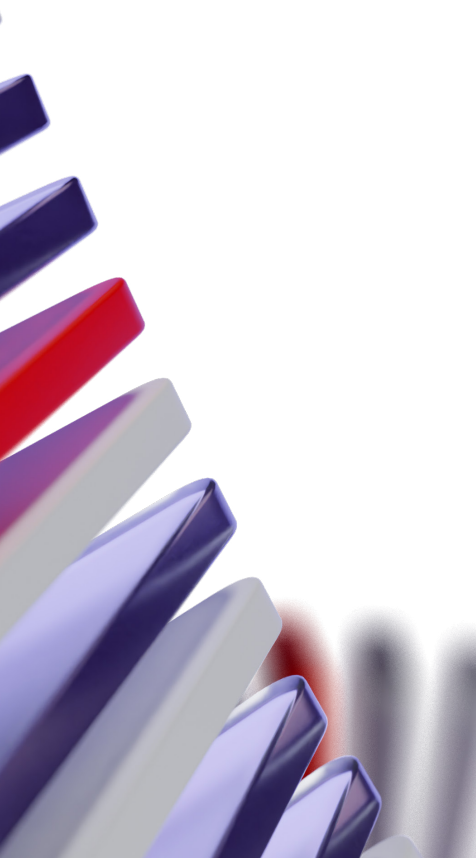
In the manage phase, automation administrators are overseeing automation management from deployment to compliance to reporting. Ansible Automation Platform provides these roles with comprehensive yet easy-to-use management capabilities through automation controller (the control plane for Ansible Automation Platform), which offers powerful workflows and ready-to-use automation. Other key features for automation administrators include:

- **Ansible automation hub**, which provides efficient access to trusted, prebuilt automation content.
- **Automation analytics** and **Red Hat Insights**, which offer real-time reporting on job volumes and health.
- **Ansible Lightspeed intelligent assistant**, which provides instant guidance to administrators and operators on maintaining and optimizing Ansible Automation Platform and automation jobs and workflows.

Key tools

- Ansible development tools
- Automation controller
- Ansible automation hub
- Private automation hub
- Automation mesh
- Ansible Lightspeed
- Automation analytics and Red Hat Insights
- Event-Driven Ansible

Explore the comprehensive features and benefits of Ansible Automation Platform in more depth.



Scale

Automation architects, IT Ops directors

The scale phase focuses on extending automation across the enterprise. To do this effectively, automation architects and IT Ops directors need to make sure automation tooling can provide the necessary versatility, integration, coordination, and scalability for a range of deployment types, IT landscapes, domains, and systems. Ansible Automation Platform has a flexible, container-native architecture that supports every task, at any scale, and includes other essential capabilities and features for automation architects and IT Ops directors, including:

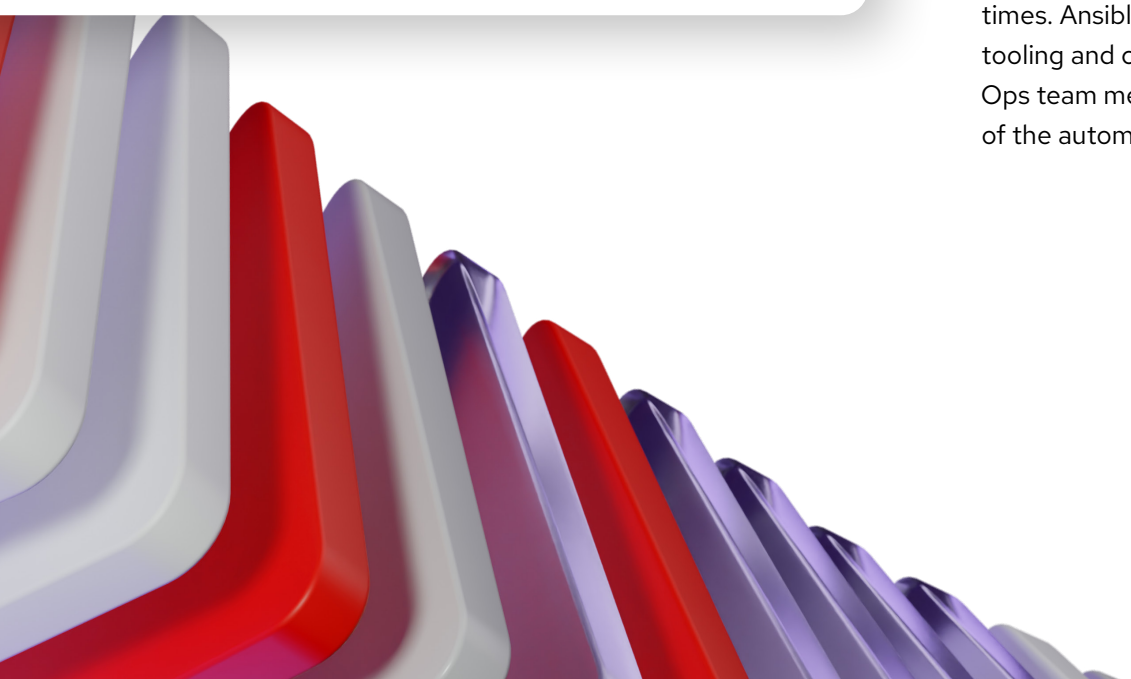
- **Event-Driven Ansible**, which provides event-handling capabilities for creating advanced end-to-end automation scenarios for a wide variety of IT operations.
- **Automation mesh**, an overlay network that connects networks and environments and provides a flexible way to scale large inventories across diverse network topologies, platforms, and teams while integrating with current technologies and maintaining a focus on security.

Key tools

- Automation execution environments
- Automation controller
- Automated PaC
- Ansible Content Collections
- Automation analytics and Red Hat Insights
- Automation mesh
- Event-Driven Ansible

Learn more about how automation architects can build with an automation-first mindset in The automation architect's handbook e-book.

There is no universal approach to automation. While the roles and objectives mentioned above are common, every IT organization looks and functions differently, according to their unique business needs. Team members can have overlapping responsibilities, and may focus on creating, managing, or scaling automation at different times. Ansible Automation Platform offers tooling and capabilities that empower all IT Ops team members to support every stage of the automation journey.



Organizational domains that can benefit from automation

Regardless of where you might be on your automation journey, Ansible Automation Platform is designed to help you:

Accelerate

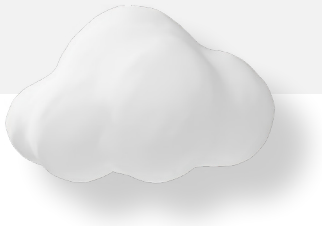
Work more efficiently with the power of Ansible's massive open source community and prebuilt content collections of the most-used Ansible Roles and modules. Codify your infrastructure and share across teams and environments where you're already running deployments, whether on premise or in the cloud.

Orchestrate

Eliminate common points of friction in your IT processes with automated workflows that streamline and connect multiple domains, systems, use cases, and teams without slowing down development time.

Innovate

Take automation even further with analytics, policy and governance, and content management. Ansible Automation Platform provides tools that make day-to-day work more efficient, helping you solve problems once and share the results with everyone.



Some of the top areas where organizations implement automation across their enterprise include:

1.

AI automation

As organizations increasingly look to implement AI for IT operations (AIOps), a reliable automation foundation becomes essential for success. By automating AI infrastructure deployment, usage, and scaling, Ansible Automation Platform can help increase your infrastructure readiness. Using Event-Driven Ansible, you can turn observability data into automated action, which makes sure intelligent operations are effective and compliant.

Find out how to streamline CI/CD pipelines with Ansible Automation Platform.

2.

Virtualization infrastructure management

Whether you want to improve the management of existing virtual machines (VMs) or begin modernizing your applications, Ansible Automation Platform can help you manage the complete VM lifecycle and efficiently migrate to Red Hat OpenShift® Virtualization. It supports the provisioning, patching, and enforcement of configuration standards of VMs, and improves the speed and consistency of migrations while preserving existing virtualization investments.

3.

Network automation

Efficient, reliable, and streamlined network management across domains and devices is critical for modern IT operations. Ansible Automation Platform can help build effective automated NetOps processes for management and maintenance tasks, and immediate responses to network changes. Ansible Automation Platform also allows teams to extend automation to the edge while maintaining consistency and a strong security focus.

Read the Network automation guide e-book to learn more.

4.

Operating systems automation

Modern IT teams are tasked with managing diverse processes, technology stacks, and teams across the enterprise. Ansible Automation Platform streamlines the provisioning, ongoing configuration, and overall management of operating systems, including the deployment of applications and infrastructure, to ease complexity, accelerate scaling, and ensure consistency.

Discover edge automation industry use cases in the Automation at the edge e-book.

5.

Cloud automation

Standardizing configuration and deployment across public, private, and hybrid clouds presents a challenge for IT Ops teams. Ansible Automation Platform provides a unified approach, offering the ability to manage, coordinate, and operationalize diverse cloud operations through a single interface. This approach gives teams centralized control that provides consistency and maintains compliance.

Read the Automate your hybrid cloud at scale e-book to learn more about cloud automation.

6.

Application delivery

To maintain competitiveness, organizations need to be able to respond to market demands quickly and efficiently. This requires streamlined application delivery with minimal downtime. Ansible Automation Platform simplifies multitier application deployment using a common framework and offers centralized management of application files, accelerating service configuration and streamlining deployment.

Given the number of ways you can start with automation within your organization, how do you know the best place to start?

These 4 tips can help you choose the best use case for your IT environment:

1. Focus on your business objectives

Begin with a few simple use cases that directly support your IT organization's top business objectives. Measure results and expand from there, potentially advancing to something more complex in the same domain.

Over time, add more domains and start to implement workflows. Remember, implementing automation across your organization is an iterative process, not something that's done once.

2. Use, refine, learn, and expand

Automation is a strategic imperative, so treat it as such as you implement and automate more processes and systems.

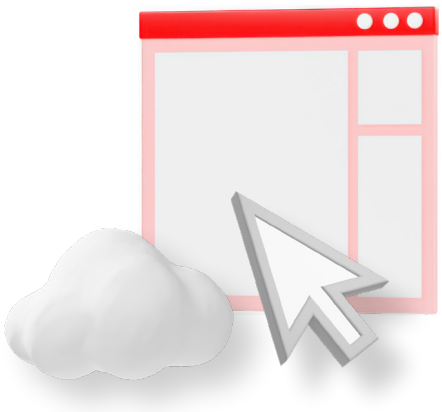
3. Don't begin with a broken process

If current operational processes are inefficient, automation or AI won't make them better. Focus instead on processes that work but could be improved through automation.

4. Involve your teams

Automation is an ongoing journey. Share key learnings and best practices to empower teams to build skills as you scale automation throughout your organization. The more that employees can see the benefits of automation over perceived potential threats, the faster they'll embrace it. Learn more about how to get early buy-in from your teams in this interactive e-book: The automation architect's handbook.

The benefits of the Red Hat Ansible Automation Platform ecosystem



Red Hat has built a diverse ecosystem of technology partners that provide software and other products that can support your organization.

For Ansible Automation Platform, these partners are critical, as their contributions to Red Hat Ansible Content Collections help you to get up and running on the platform in less time. This precomposed content—from certified partners and Red Hat—is validated against certain versions of Ansible Automation Platform and consists of bundles of modules, plug-ins, roles, and documentation, which you can consume in a single place.

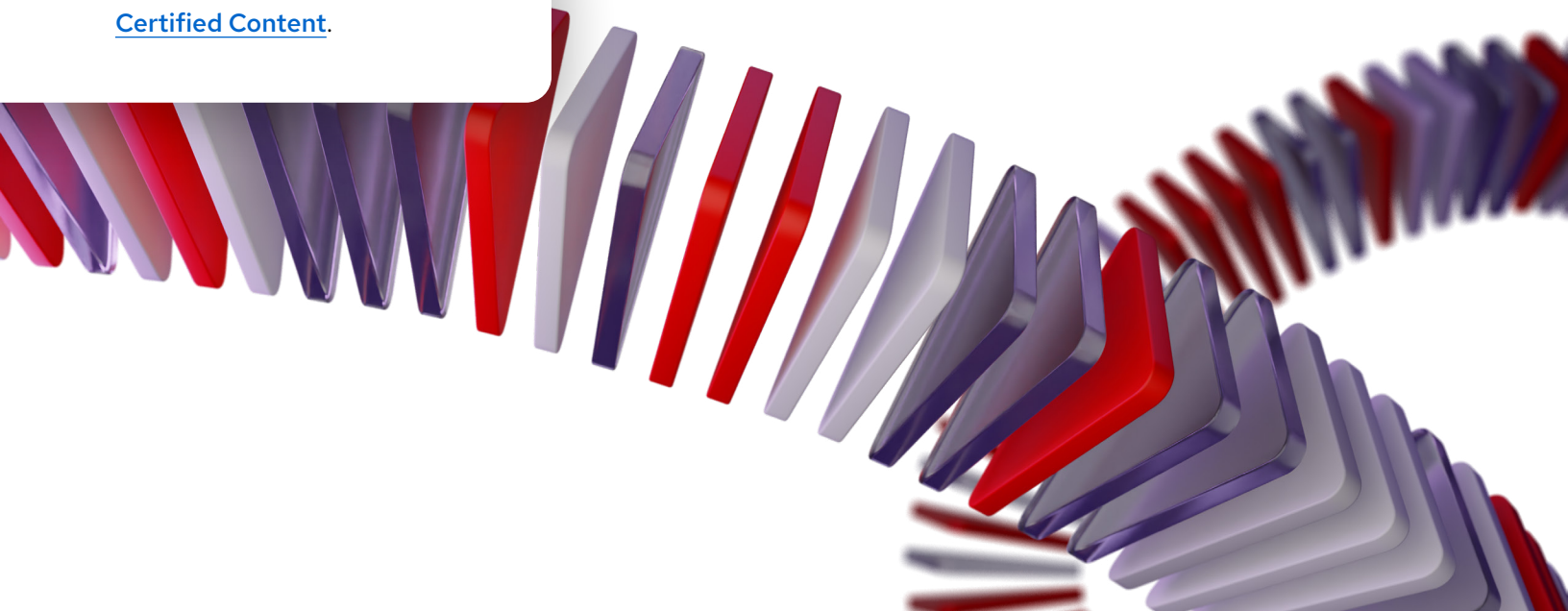
What does this mean?

You have less work to do when finding and assembling the different roles and modules you require. Plus, Ansible Content Collections are released and maintained independently of the main product versions, allowing for a faster release cadence for content.

With an Ansible Automation Platform subscription, you have full access to Ansible automation hub, which has more than 190 certified content collections, comprising more than 40,000 modules curated for consistent and compliant delivery.

Red Hat Ansible Certified Content in the Ansible automation hub includes collections from partners such as Amazon, Arista, Aruba, Cisco, Datadog, Dell, Dynatrace, Fortinet, Google, IBM, Splunk, VMWare, and many more.

Explore Red Hat Ansible Certified Content.



Strategies and resources for automation adoption

There is no singular path to successful enterprise IT automation adoption. Each journey is unique to the organization, and the individual practitioners who deploy and use the technology.

Even so, to be successful, automation adoption initiatives should be supported at both the leadership and practitioner levels within your organization. For example, if you're in an IT leadership position, identify automation enthusiasts within your organization to help lead your initial pilot deployment, or create an automation community of practice or center of excellence. If you're an automation practitioner, find an executive or influential sponsor to help you promote automation adoption from the top down.

Accelerating automation adoption takes careful planning

The good news is you're not alone, and Red Hat has many resources with strategies and tips to help you scale automation across your entire organization:

- Learn how to assess and advance your automation maturity in the Advance your automation maturity e-book.
- Read the Tales from the field: A system administrator's guide to IT automation e-book, a compilation of short real-world stories that outline the excitement, frustrations, successes, and challenges of incorporating a holistic IT automation mindset into organizations and teams across the globe.
- Discover strategies and best practices for getting buy-in for automation, from the C-suite to the IT department, in The automation architect's handbook.
- Learn how an IT executive can foster automation success in The IT executive's guide to automation e-book. Find out how to:
  - Be a champion rather than a sponsor.
  - Align to a business objective.
  - Support change and collaboration.
  - Encourage adoption by investing in people.

Ultimately, a team that is properly trained on automation can be a successful team. Find out what type of training your team needs on Ansible Automation Platform to either get started or advance their skills. Red Hat Training and Certification offers a wide variety of options for every skill level.

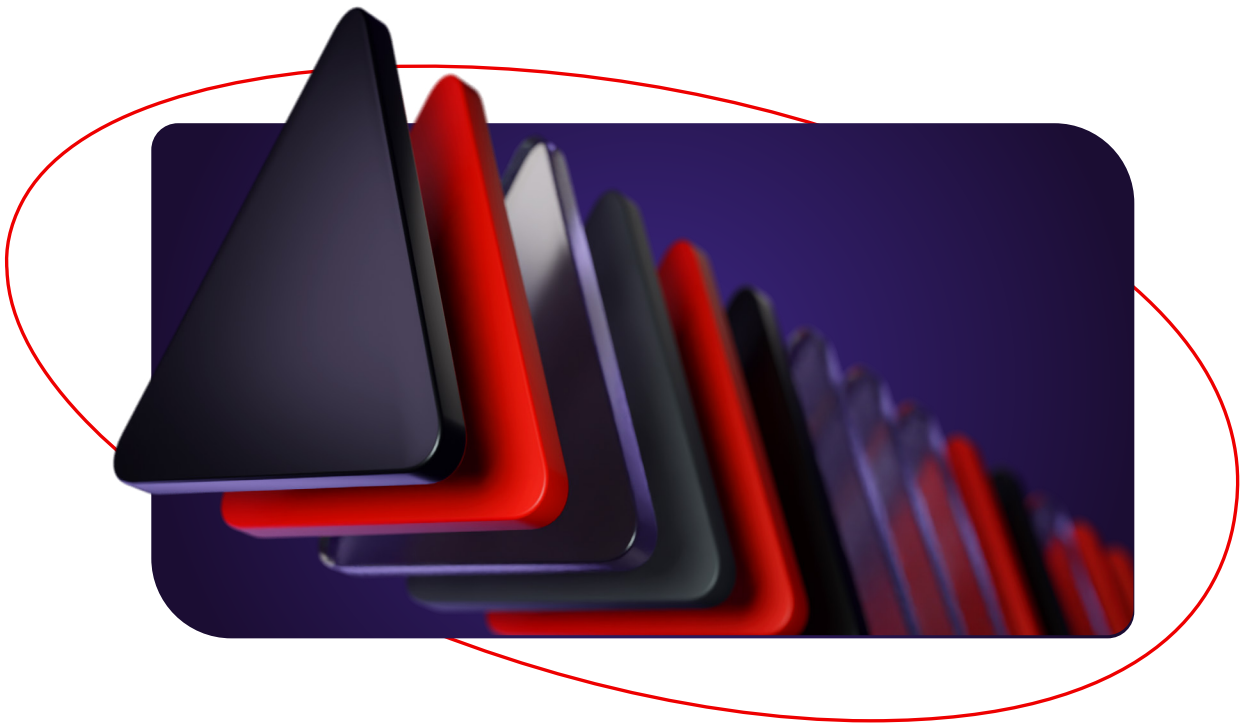
How to get started

Want to learn more about Ansible Automation Platform? We can help. Choose the path that's right for you.

Download an Ansible Automation Platform 60-day trial subscription that includes Event-Driven Ansible and access to Ansible Lightspeed.

Connect with Red Hat Consulting and accelerate your time to value through a complimentary automation discovery session. Red Hat experts will work side by side with you to identify your business goals and challenges so they can provide an automation approach that best fits your needs.

Get started with no-cost, introductory Ansible training and learn the essentials of creating, scaling, and managing automation.



Taking the next step

Ready to implement automation across your organization? We can help your company get started and embrace the changes it needs.

See how Red Hat Consulting can help address your use cases, assess your organizational maturity, and evolve automation in your organization.

Also, consider Ansible Automation Platform training like the Red Hat Ansible Automation Platform Boot Camp to accelerate your skills as you expand your automation use. Not sure where to start? Find your place on the Red Hat Ansible Automation Platform skills path.

Talk to Red Hat Technical Account Management teams to help you open up collaboration with other teams, receive operational guidance, and take the next step in your automation journey.

Discover how event-driven automation with Red Hat Ansible Automation Platform technology works and how you can apply it to your IT operational challenges. Use this interactive lab to learn at your own pace about how event-driven automation can help streamline work and deliver better IT end-user experiences.

Finally, discover how Ansible Lightspeed can help your teams turn automation ideas into functional Ansible code to create Ansible content more efficiently. Learn how to use this technology through a self-paced lab.