Red Hat | Google Cloud

Migrate to Google Cloud using Red Hat Ansible Automation Platform

Automate your cloud resource life cycles

Red Hat Ansible Automation Platform lets you automate complete cloud workflows. With Google Cloud, you can:

▸ Set up cloud projects.

▸ Deploy and retire cloud instances.

▸ Create and destroy Kubernetes clusters.

▸ Install web servers.

▸ Patch operating systems.

Read this overview to learn more about these use cases.

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Migrate and manage workloads across multicloud environments

Deploying business-critical applications in cloud environments is now the norm. Even so, migrating to the cloud and managing workloads and resources across hybrid and multicloud environments can be daunting, time-consuming, and error-prone when performed manually. Cloud automation—applying IT automation to cloud technologies—can help you move to and manage cloud environments more efficiently at scale.

Cloud automation lets you streamline complete workflows to manage IT life cycles across your environment. Orchestrate cloud resources by automatically setting up and migrating the environments, systems, and applications that your business needs. Operationalize ongoing cloud processes by automating the Day 1 and Day 2 tasks that keep your environments running. Govern cloud environments by applying and enforcing policies at scale to ensure that all elements run according to business requirements.

Red Hat® Ansible® Automation Platform on Google Cloud lets you orchestrate, operationalize, and govern workloads and resources across your entire environment—including private clouds, on-site datacenters, and edge locations—to provide a consistent automation experience.

Orchestrate your Google Cloud environment with Ansible Automation Platform

A unified automation platform that works with your cloud provider and other technologies in your IT environment is central to effective cloud workflow migration and management. Red Hat Ansible Automation Platform on Google Cloud speeds migration of your existing applications to Google Cloud and then simplifies IT workload and resource management across your hybrid and multicloud environments.

Ansible Automation Platform is an enterprise IT automation solution that includes everything needed to build, deploy, and manage automation at scale. A simple automation language lets you create advanced workflows and share and manage automation assets across your organization. Integration with native Google Cloud services like Google Virtual Private Cloud (VPC) and Google Compute, along with Ansible Content Collections for Google Cloud, helps reduce the time it takes to get started. The power of cloud computing combined with the convenience of integrated services lets you deploy the platform and automate Google Cloud resources right away.

As part of Ansible Automation Platform, Event-Driven Ansible lets you automate IT actions in response to events observed in your environment via user-defined, rule-based constructs. It receives notifications from third-party tools, decides which actions to take based on your rules, and then responds automatically using your Ansible Playbooks. With Event-Driven Ansible, you can create end-to-end, fully automated workflows for a broad array of complex use cases across your IT landscape.

Red Hat supports this subscription-based, self-managed solution at the Premium Support level, providing unlimited 24x7 access to a global network of experienced technical support engineers while Google Cloud provides expert support for your cloud infrastructure. Integrated billing of Ansible Automation Platform with your other Google Cloud services gives full visibility into costs. And you can use your Google Cloud committed use discounts (CUDs) toward Ansible Automation Platform deployments.

Simplify automation with Red Hat Ansible Certified Content

The Google Cloud Ansible Certified Content Collection integrates Ansible Automation Platform and Google Cloud so you can automatically manage your entire deployment across IT domains and technologies. Available via Ansible automation hub, this precomposed content includes modules, roles, plug-ins, and documentation for automating many common Google Cloud operations—like Compute Engine instance, Cloud SQL database creation, and Google Cloud deployment monitoring—directly from Ansible Automation Platform. Use this collection to build advanced automation workflows based on trusted content developed, tested, and supported by Red Hat and Google Cloud. And because Red Hat maintains and releases the direct-to-user automation assets in all Red Hat Ansible Certified Content collections separately from main product releases, you can get started with the latest features and content without delay.

Get started faster with Google Cloud use cases

There are many use cases that you can automate with the Google Cloud Ansible Certified Content Collection. Here are a few examples that you can customize and deploy across your hybrid and multicloud environments.

Set up Google Cloud projects

With the gcp_resourcemanager_project module, you can create Google Cloud projects that are always in compliance with corporate policies. Override module parameters in your reusable playbooks, based on specific project requirements, and let sensible default values ensure that configurations are complete.

Deploy Google Cloud instances

The gcp_compute modules help you simplify Google Cloud instance deployments and maintain consistency across regions and zones. Create a playbook using the certified modules to allocate storage, set up Google VPC networks and subnetworks, configure firewall rules, generate public IP (Internet Protocol) addresses, and provision virtual machine (VM) instances. Add variables for configuration options like Google Cloud region, zone, and project to make your playbook reusable and deploy Google Cloud instances anywhere.

Retire Google Cloud instances

Using Ansible Automation Platform, you can control VM sprawl. Shut down untagged, unused, and occasionally needed VMs by retiring Google Cloud instances and related resources. Use the gcp_compute modules to retire VM instances, deallocate public IP addresses, remove firewall configuration rules, terminate Google VPC networks, and unmap storage. Avoid hard-coded values in your playbooks—and reuse playbooks across your environment—by using the modules to dynamically look up information

Read the Automate your hybrid cloud at scale e-book to learn more about building complete, automated hybrid cloud workflows.

about your Google Cloud resources.

Create Google Kubernetes Engine clusters

Google Cloud Ansible Certified Content simplifies writing playbooks that create Google Kubernetes Engine (GKE) clusters consistently across your Google Cloud deployment. Deploy a GKE cluster and then use the returned data structure describing the newly allocated cluster to create a node pool— all in a single playbook using the certified content.

Destroy Google Kubernetes Engine clusters

With the gcp_container_cluster module, destroying GKE clusters is simple. Provide the cluster name, location, and state to the module, and Ansible Automation Platform automatically terminates the cluster and deallocates any resources, helping you control cloud costs.

Install web servers in Google Cloud

Ansible Certified Content Collections let you write reusable playbooks to install and configure web servers simply and consistently across your Google Cloud environment. Use certified modules to install the web server using YUM (Yellowdog Updater Modified), set default home pages, start servers, and configure firewalls—all in a single, easy-to-read playbook.

Patch Red Hat Enterprise Linux installations

With Ansible Automation Platform, you can create complex automation workflows—like complete Red Hat Enterprise Linux® operating system upgrades on your Google Cloud instances—that help speed infrastructure maintenance tasks. Write playbooks that download and install new operating system versions, conditionally reboot virtual machines, and automatically create reports describing the installed services and packages. Then, publish your playbooks to Ansible automation hub for easy sharing across your organization.

Learn more

Discover more about using Ansible Automation Platform to automate your Google Cloud deployment and hybrid and multicloud environments. Read about Ansible Automation Platform and Google Cloud, and try Ansible Automation Platform at no cost.

About Red Hat

Red Hat is the world's leading provider of enterprise open source software solutions, using a community-powered approach to deliver reliable and high-performing Linux, hybrid cloud, container, and Kubernetes technologies. Red Hat helps customers develop cloud-native applications, integrate existing and new IT applications, and automate and manage complex environments. A trusted adviser to the Fortune 500, Red Hat provides award-winning support, training, and consulting services that bring the benefits of open innovation to any industry. Red Hat is a connective hub in a global network of enterprises, partners, and communities, helping organizations grow, transform, and prepare for the digital future.

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