

Simplified Management for Google Cloud Platform

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- » Visibility and Control
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Organizations across the globe are using **Google Cloud Platform** (GCP), a suite of cloud computing services for building, testing, deploying and managing applications and services. The applications and services run on the same infrastructure that Google uses internally for its end-user products. Along with a set of management tools, GCP provides a series of modular cloud services, including computing, data storage, data analytics and machine learning.

The provisioning and management of IT resources, as well as the development of applications, involves a mix of tools, including orchestration tools, public and private cloud frameworks, and data center automation and configuration management tools. So even GCP users can become mired in complexity as they attempt to provision resources, while IT teams can lose visibility and control over those resources if a process in the workflow fails.

Moreover, IT administrators and end users are challenged by what seems like an infinite number of choices that must be made before they can successfully launch and provision cloud resources and services in most public clouds.

CloudBolt helps IT administrators ensure the entire process of requesting, deploying and terminating the use of virtual machines and cloud services runs properly. At the same time, end users receive an intuitive self-service IT portal and unified manager to provision and manage the resources they need. It integrates on-premises virtualization and private cloud environments with public clouds, configuration management tools and domain-specific technologies.

In effect, CloudBolt homogenizes access to virtualization and cloud environments – such as Google Cloud Platform, Amazon Web Services, Microsoft Azure or VMware – so the end user doesn't have to understand the details of how these environments work, what parameters are available or the inner workings of low-level network, compute and storage capabilities.

Why Do Google Cloud Platform Users Need **CloudBolt**?



SIMPLIFIED MANAGEMENT, FASTER PROVISIONING

Every cloud computing platform has its own wizards, lingo, paradigms and technology-specific terminology users must know or understand to provision a compute resource or launch a service. For instance, most platforms start out asking the user what size virtual server they need. Some cloud providers start off by steering end users to certain choices, like a larger server, for instance, that the user might not really need.



CloudBolt lets IT administrators ask only the pertinent questions and provide only the valid choices that the end user should see. Then the IT admin can encode business logic into the process, to ensure the right options are used that match the user's needs. They can do this not only for the size of server (small, medium or large) but also the type of server (database, web server or WordPress server). It all comes down to making it easier for the end users to understand the process and not get bogged down by questions they don't know how to answer.

CloudBolt's cloud management platform offers users a simple catalog to spin up services. The catalog enables admins to create blueprints for controlled and repeatable deployments by end users. A blueprint can be as simple as a one-click single server build or as complex as a multi-tier load balanced application stack running in multiple environments.

Plus, a blueprint can be composed of only actions, with no servers provisioned. For example, administrators could create blueprints for ordering laptops, filing support tickets in an external tracker or providing similar solutions not involving actual VM provisioning.

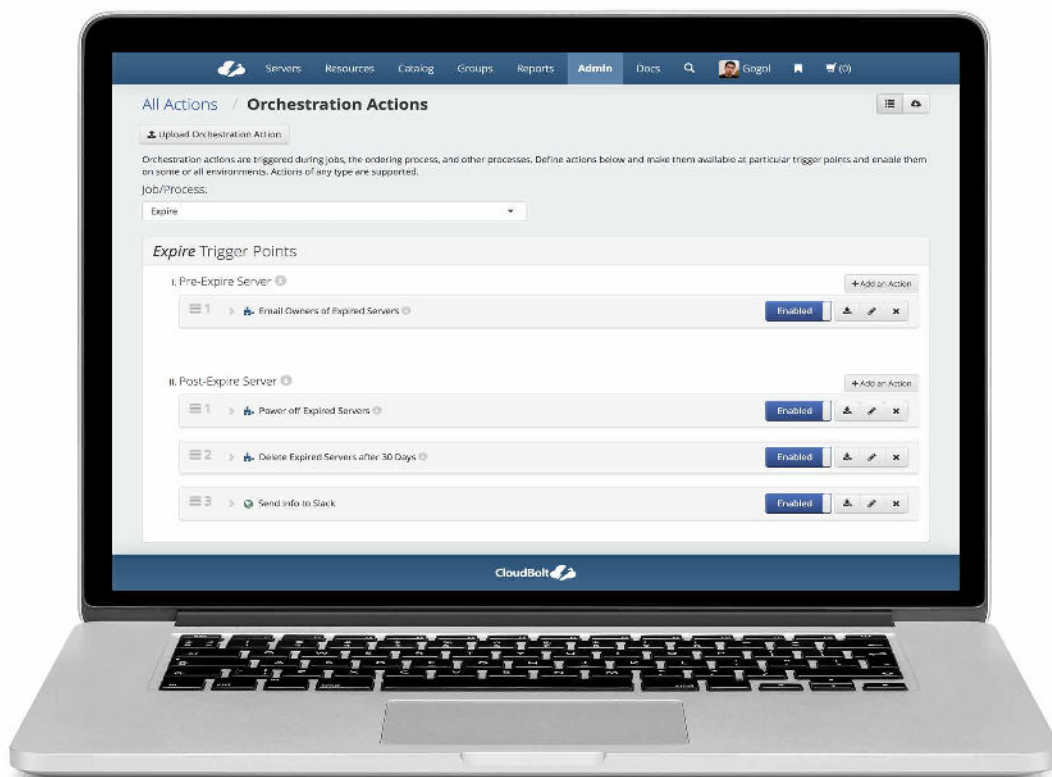
CloudBolt connects to an organization's virtualization platform and public cloud provider via resource handlers, or application programming interfaces. The resource handlers allow the CloudBolt platform to discover an organization's VMs, VM images, clusters, networks and more. Additionally, resource handlers working in conjunction with the platform's unified interface allow it to perform actions like server creation or modification for the end user.



BETTER VISIBILITY AND CONTROL OVER RESOURCE USAGE

It is far more difficult to track virtual resources than physical ones. Often, IT operation teams do not know if certain virtual servers have been sitting on the network for two days or two years.

Using CloudBolt, IT admin can enforce expiration dates. When end users provision a server, they are required to put in an expiration date. Development environments, for example, don't need to have servers forever. So, IT admin can configure expiration behavior when the expiration date is near. They can choose to email the user reminding them of the date, turn the power off or even delete the server.



One organization using CloudBolt discovered many pre-existing servers they didn't realize were still on and active. The organization was using Amazon Web Services, Google Cloud Platform and Microsoft Azure, and the CloudBolt platform discovered all of them. They had multiple accounts, which would have required having about 10 web browsers open to view all the servers.

IT admins automatically set up a 60-day expiration date on all discovered virtual machines. Then they emailed the entire company, stating that if anyone had a VM they needed to claim it, or else it would be removed in 60 days. The result was a large cost-savings for the organization, not to mention visibility into their environment that the organization did not have before.

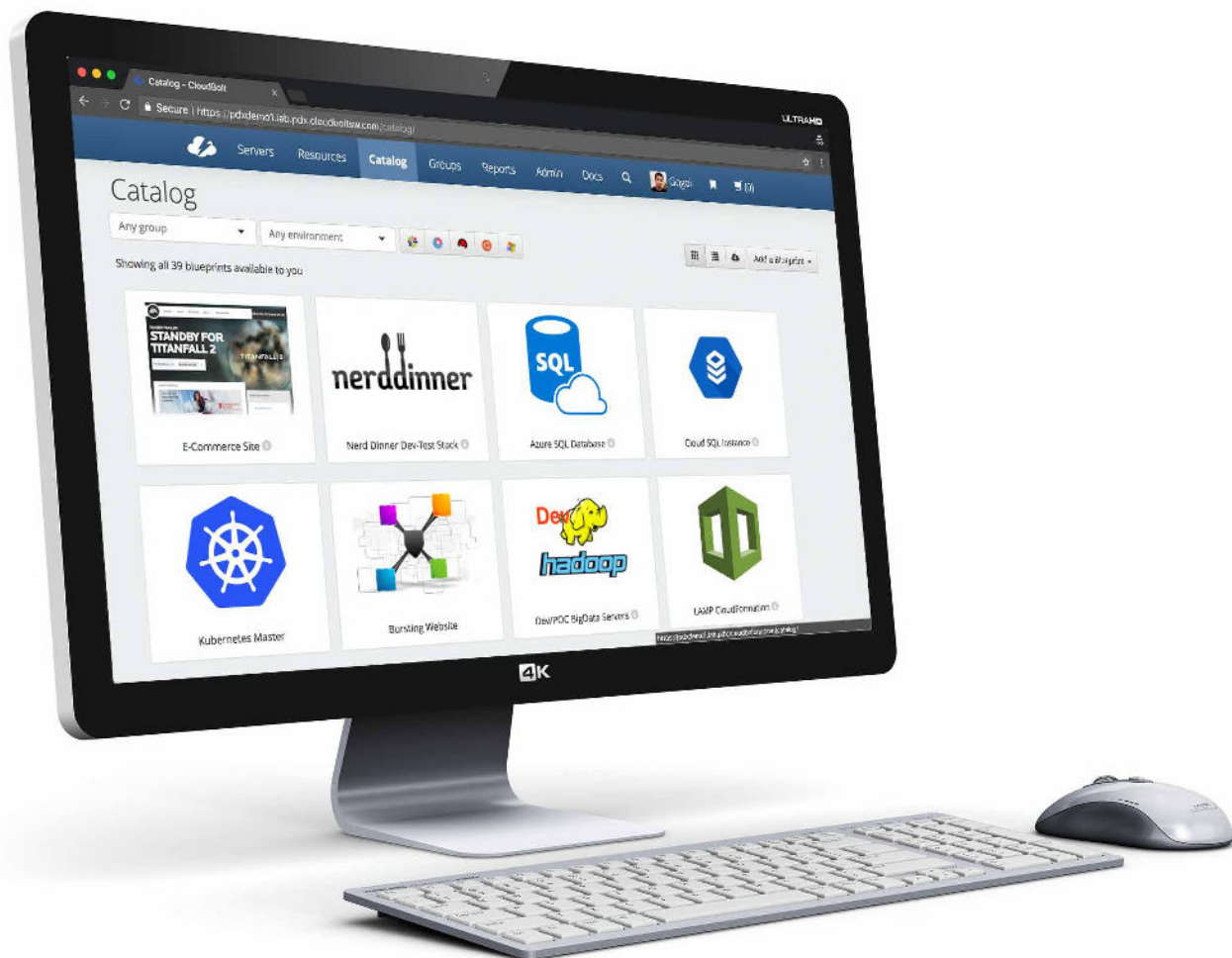
CloudBolt brings multiple accounts and cloud platforms into a single portal, enabling admins to apply business logic based on user groups and assign server expiration dates based on the requirements of the specific groups. CloudBolt also provides the ability to schedule downtime on resources, allowing admins to shut down nonessential VMs over a weekend to reduce their spend and bring servers back online Monday morning.

The platform's self-service interface also allows end users to track estimated and actual costs of resource usage.



EASIER DEPLOYMENT OF COMPLEX, BIG DATA APPS

End users can deploy complex applications to public cloud platforms. For instance, one organization used CloudBolt to build a blueprint that deploys Apache Hadoop (a big data processing system) to Google Cloud. The users can tell CloudBolt to provision 40 different VMs in Google Cloud, which represent a variety of distinct roles within the larger application. Using just a couple of clicks within CloudBolt, they can deploy massively complex applications that span many environments and servers. Users can scale the services up and down within CloudBolt and eventually delete them when they are no longer needed.





Conclusion

Google Cloud Platform provides a suite of cloud computing services for building, testing, deploying and managing applications and services. CloudBolt brings an intuitive framework, self-service capabilities and a unified manager that speeds up provisioning of resources and simplifies management, shielding GCP end users from complexity while giving them access to the resources they need. Meanwhile, enterprise IT departments maintain control over and visibility into those resources through configuration standards, usage quotas and cost transparency.

Moreover, CloudBolt builds a platform over all clouds – internal and external – to help end users leverage commodity compute, network and storage in the cloud. As a result, enterprise customers can build their own multi-cloud services on top, allowing them to build services that can cross any cloud platform.

CloudBolt Capabilities for Google Cloud Platform

Supported services	Google Compute Engine, networking, Google Kubernetes Engine, Google Cloud SQL
Discoverable resources	VM instances, zones, instance sizes, security groups, images, cloud networks, subnets, key pair names, tags on VMs
Continuous discovery and refresh	Enables full management of resources created outside of CloudBolt.
VM customization	Using Chef, Puppet, Ansible or remote scripts.
Multi-environment blueprints	CloudBolt blueprints can be set to be deployable to both GCP and any other set of clouds and virtualization systems.
Service orchestration	CloudBolt has 15 trigger points during the provisioning process that support five different types of actions: remote scripts, webhooks, email hooks, external orchestration flows in vRO or HP OO, and CloudBolt plug-ins.
Power scheduling	A weekly power schedule can be specified for VMs to shut them off during hours when they are not needed to save on costs.
Chargeback / showback / shameback	CloudBolt ingests the billing data from GCP to provide rate previews and comparisons when ordering, show the rates on servers and environments, and also generate exportable per-group billing and trend reports.
Cloud bursting	Services running in private virtualization systems can be set to scale to GCP when they reach specified maximum thresholds, then back down when the load on the resources goes below minimum thresholds.
Expiration dates	Available with per-environment and per-group configurable behavior at expiration time.
Resource quotas and limits	Limits are settable on groups, environments, GCP accounts and per user.
Continuous environment testing	Orders can be set as CIT tests within CloudBolt so deployments are tested nightly to ensure a healthy build pipeline.
VM migration from other virtualization systems/clouds	Via integration with CloudEndure.



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DS.GCP.1712.1



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ONE VIEW. MANY CLOUDS. Automation. Flexibility. Control.

CloudBolt's hybrid cloud platform enables enterprise IT departments to build, deploy and manage private and public clouds quickly and efficiently. The user-friendly portal hides the complexities of the hybrid cloud, giving end users the ability to manage and provision resources on demand, while administrators set provisioning conditions for governance. With CloudBolt, IT leverages its investment and controls costs while increasing flexibility and agility.