



Simplified Management for Microsoft Azure

- » Empower IT innovation
- » Leverage scalable resources
- » Simplify developer workflows

Organizations across the globe are using [Microsoft Azure](#) for building, testing, deploying, and managing applications and services through a global network of Microsoft-managed data centers. It provides software as a service (SaaS), platform as a service (PaaS), and infrastructure as a service (IaaS), and it supports many different programming languages, tools, and frameworks, including both Microsoft-specific and third-party software and systems.

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, backup and recovery systems, and configuration management tools.

So even Azure 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.

Why Do Enterprises Need CloudBolt?



CloudBolt helps IT administrators provide a simple, self-service portal for provisioning and managing resources instead of giving their end users access to a complicated console from a vendor. IT admins can ensure the entire process of requesting, deploying, and terminating the use of virtual machines and cloud services runs properly. CloudBolt integrates on-premises virtualization with public clouds, configuration management tools, and domain-specific technologies.

In effect, the cloud management platform homogenizes access to virtualization and cloud environments, such as [Microsoft Azure](#), [Amazon Web Services \(AWS\)](#), [Google Cloud Platform \(GCP\)](#), [Nutanix Acropolis](#), or [VMware](#). This way, the end user doesn't have to understand the details of how these environments work, what parameters are available, or what the inner workings are of low-level network, compute, and storage capabilities.

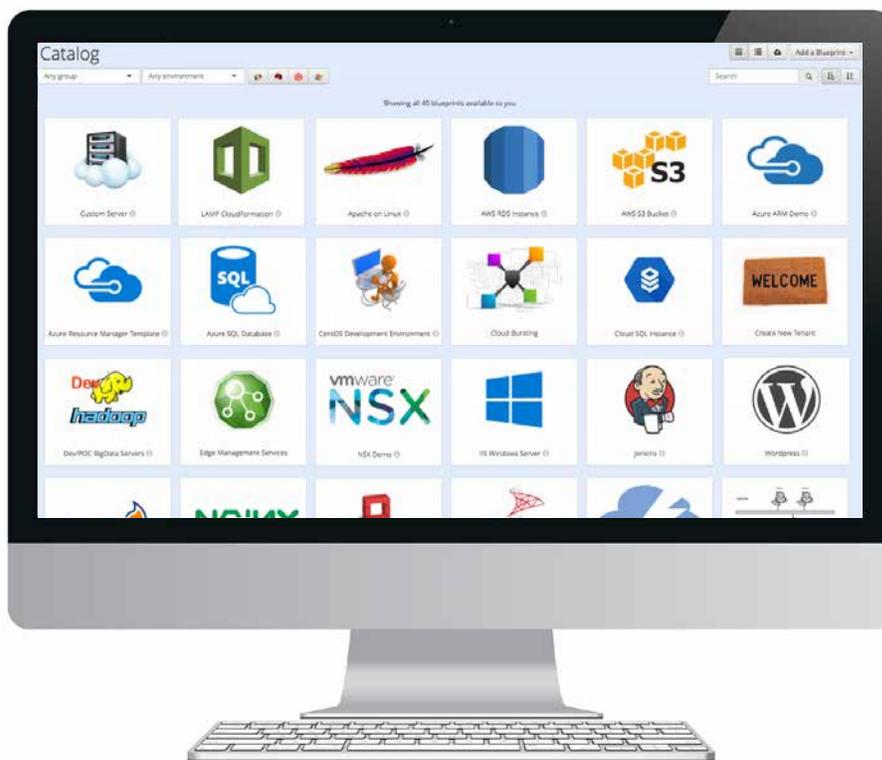
SIMPLIFIED MANAGEMENT, SPEED OF PROVISIONING

Every cloud computing platform has its own wizards, codes, and technology-specific terminology that users must understand to provision a compute resource or launch a service. For example, most platforms start out asking the user what size virtual server they need with settings for the number of CPU processors, memory, and size of the disk. Microsoft Azure gives end users access to many configuration choices that can end up providing more resources running at a higher capacity than what is needed for a particular virtualized workload.

CloudBolt lets IT administrators ask the pertinent questions of the end user ordering the servers specific to the needs of their organization. Then the IT admin can encode business logic into the process, to ensure the right size and appropriate server matches what their users need specifically. They can simplify the user's choices not only for the size of the server – small, medium, or large – but also for any other parameters involved in the server build (for example, the type of server, where it should run, what should be installed on it, and how it should be configured).

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. It also makes it much easier to maintain corporate standards and IT best practices during provisioning.

CloudBolt's hybrid cloud management platform offers users a simple self-service catalog to spin up resources quickly from a single place. 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 user accounts, virtual networks, or cloud-specific services not involving actual VM provisioning.



CloudBolt connects to an organization's virtualization platforms and public cloud accounts via native, supported Application Programming Interfaces (APIs). For all supported technologies, the CloudBolt platform knows how to discover an organization's VMs, VM images, clusters, networks, storage options, and more. In addition to providing new resources via these myriad APIs, CloudBolt is able to manage resources throughout their lifecycle, giving end users the ability to manage and alter their resources (within limits set by the CloudBolt administrators) and to clean them up.

BETTER VISIBILITY AND CONTROL OVER RESOURCE USAGE

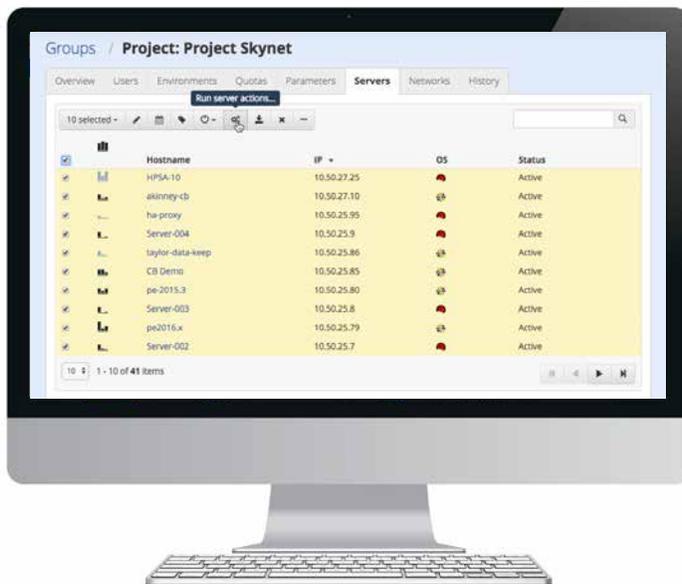
It is far more difficult to track virtual resources than physical ones. Often, IT operation teams do not know if certain virtual servers have been sitting on the network for two days or two years. Using CloudBolt, IT administrators can enforce expiration dates. When end users provision a server, they can be required to put in an expiration date. Development environments, for example, don't need to have servers forever. When the expiration date is near, CloudBolt will notify the user, reminding them of the date. The user can then request more time, request to power off the

server for a certain period of time, or simply let the server expire as scheduled. CloudBolt administrators can control per-group and per-environment behavior and thresholds upon expiration.

MULTIPLE CLOUD COST MANAGEMENT

CloudBolt administrators can provide a single platform for users to consume multiple cloud resources and manage the consumption so that infrastructure is used more efficiently across all cloud providers.

An organization recently using CloudBolt had multiple accounts, which would have required 10 web browsers open to view all of the servers. Their administrators were able to automatically set up a 60-day expiration date on all discovered virtual machines. They notified the entire company stating that if anyone had a VM, they needed to claim it because it would be removed in 60 days.



CloudBolt admins can apply business logic based on user groups, assigning server expiration dates, sizing options, and any other policies based on the requirements of the specific groups. For example, for developers who work roughly during business hours, CloudBolt can power down their servers for 12 or more hours a day and on weekends to save a huge portion of their cloud provider bill.

MORE EFFICIENT WORKFLOW

Many enterprise customers are increasingly looking to shift workloads from their data centers to public cloud platforms like Azure and others. Azure provides a specific set of templates that ensure the smooth operation of workflow processes. Using CloudBolt, admins can easily build a blueprint that lets end users easily launch these Azure templates so that all of the provisioning configurations are managed in the CloudBolt platform but deployed in the Azure cloud.

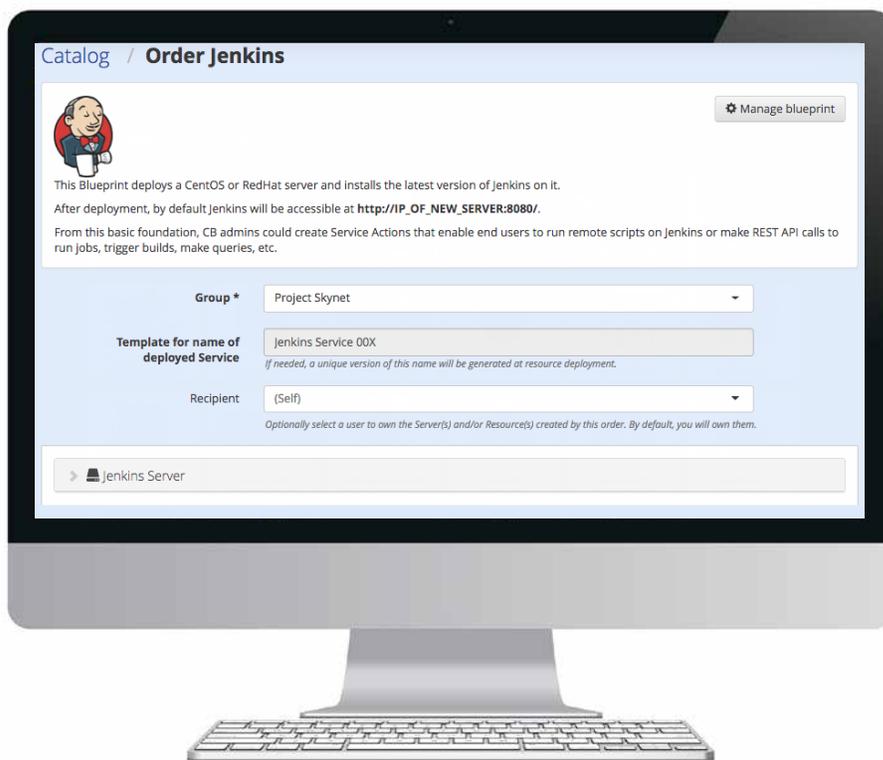
CloudBolt can be installed in an enterprise data center or from the [Microsoft Azure Marketplace](#) portal to manage servers, applications, and environments across a wide range of virtualization and cloud providers. Administrators can control their virtualization environments, private clouds, and public clouds all from one console and then expose services and applications to end users through an intuitive user portal.

EMPOWER DEVOPS

Development and engineering teams are some of the largest consumers of cloud and transient resources. As developers test applications or IT systems, they need to quickly spin up virtual machines and other resources while controlling costs. They need to use the right resources for their projects. In many cases, they wind up building their own servers outside the control of IT. This can lead to mismanagement of resources, server sprawl, and servers vulnerable to network and cyber-attacks.

End users want to augment their usage of diverse environments. Because CloudBolt is designed specifically for hybrid infrastructure, access to internal and external clouds can be from a single, user-facing application. Users can then manage and provision resources on demand and administrators can set provisioning conditions that limit user access to resources that they don't need.

CloudBolt's blueprint engine can deploy a blueprint independent of the cloud technology chosen. For example, a CloudBolt admin can set up a blueprint for a Jenkins server that can be deployed in an internal data center, AWS, or Microsoft Azure, with no change to the blueprint itself. The end user does not even need to know where it is being deployed.



EASIER DEPLOYMENT OF COMPLEX, BIG DATA APPS

Azure users can deploy complex applications to public cloud platforms. For instance, if an organization wants to deploy a big data processing system such as Apache Hadoop to a public cloud like Azure, a CloudBolt blueprint can be created to deploy the system. With a couple of clicks, end users can deploy massively complex applications that span across scores of servers. Users can scale the VMs up and down within CloudBolt and eventually delete them when they are no longer needed.



Conclusion

Microsoft Azure helps businesses and government organizations build, deploy, and manage applications and services through a global network of Microsoft-managed and Microsoft-partner hosted datacenters. Their cloud platform provides both platform-as-a-service (PaaS) and infrastructure-as-a-service (IaaS) capabilities and supports many different programming languages, tools, and frameworks, including both Microsoft-specific and third-party software and systems.

CloudBolt brings an intuitive framework, self-service capabilities, and a unified manager that speeds up the provisioning of resources and simplifies management – shielding 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. The CloudBolt platform's self-service interface also allows end users to track costs and estimated costs of resource usage.

CloudBolt Capabilities Microsoft Azure

Azure Services Supported	Azure Virtual Machines, Azure Templates
Discoverable Resources	Virtual Machines by Region, marketplace images, private images, resource groups, availability sets, storage accounts, and subnets.
Continuous Discovery and Refresh	Discovery and full management of resources. This includes tracking changes made outside of CloudBolt to resources created both inside and outside of CloudBolt.
Supported VM Management Actions	Scaling up and down, running scripts, power control, accessing SSH and RDP from within the browser, managing NICs and EIPs.
Multi-environment Blueprints	CloudBolt blueprints can be set to be deployable to both Azure and any other set of clouds and virtualization systems.
Configuration Management	CloudBolt integrates deeply with Ansible, Chef, and Puppet to provide consistent configuration across public and private cloud environments.
Orchestration	CloudBolt has 43 distinct trigger points where admins can choose to execute additional instructions in CloudBolt actions. Five different types of actions are available: 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 interprets the rate data published by Azure (and other cloud providers) to provide cost estimates and comparisons when ordering, show costs across environments, groups, and sets of servers, and also generate exportable per-group billing and trend reports.
Cloud Bursting	Services running in private virtualization systems can be set to scale to other environments (including public clouds) when they reach specified maximum thresholds, then back down when the load on the resources goes below minimum thresholds. This allows CloudBolt end users to build their private environments for baseline load, and rent resources for peak times.
Expiration Dates	Yes, with per-environment and per-group configurable behavior at expiration time.
Resource Quotas and Limits	Limits are settable on groups, environments (clusters), 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 to Public Clouds	Yes, via integration with CloudEndure.



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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 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.