Simplified Management for VMware Virtualization Environments

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VMware virtualization products are widely accepted as the enterprise-standard in private datacenter virtualization, but organizations using VMware commonly face certain challenges. In particular, the popularity of public clouds has brought users to expect a self-service interface through which they can manage and control their own resources.

This is not something that VMware provides a good solution for, and many large organizations have a less-than-satisfying process for users to request resources from the IT team via a ticketing system. Also, in hybrid, heterogeneous environments, VM sprawl and lack of visibility are often problematic.

CloudBolt helps VMware customers by providing a single intuitive interface through which users can provision and manage their resources in VMware. The web interface is exceedingly simple, enabling self-service for a wider range of users than ever before.

Furthermore, CloudBolt allows IT admins to set up their organization's policies within CloudBolt so they can ensure that VMs are provisioned and configured according to company standards and that users are abiding by the appropriate expiration dates, approvals and resource limits.

With CloudBolt, VMware customers gain agility, provisioning new environments with ease while removing manual, tedious tasks so they can focus on high-value work. With support for 18+ different virtualization and public cloud providers, IT admins gain insight across their entire estate that they can use to end VM sprawl, reduce costs and optimize resource allocation.

CloudBolt provides unparalleled extensibility, enabling IT admins to customize the CloudBolt UI to their needs, readily automate their custom policies and procedures, and integrate other tools and solutions into the processes that are driven by CloudBolt. Examples of this extensibility can be browsed and imported from the CloudBolt forge (a public GitHub repository).

Self-Service Catalog

CloudBolt offers users an intuitive, self-service catalog for requesting IT 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.

Blueprints can be created for any type of request, not just servers. Some examples of blueprints that CloudBolt customers have created include a 50-node Apache Hadoop deployment to the public cloud, a storage bucket, an Oracle RAC cluster, a firewall rule, a load balancer configuration change and a SQL server.

The blueprints can be exported as JSON, imported and stored in source control. CloudBolt also hosts a public content library of sample blueprints that customers can browse and easily import directly from their own CloudBolt UI.

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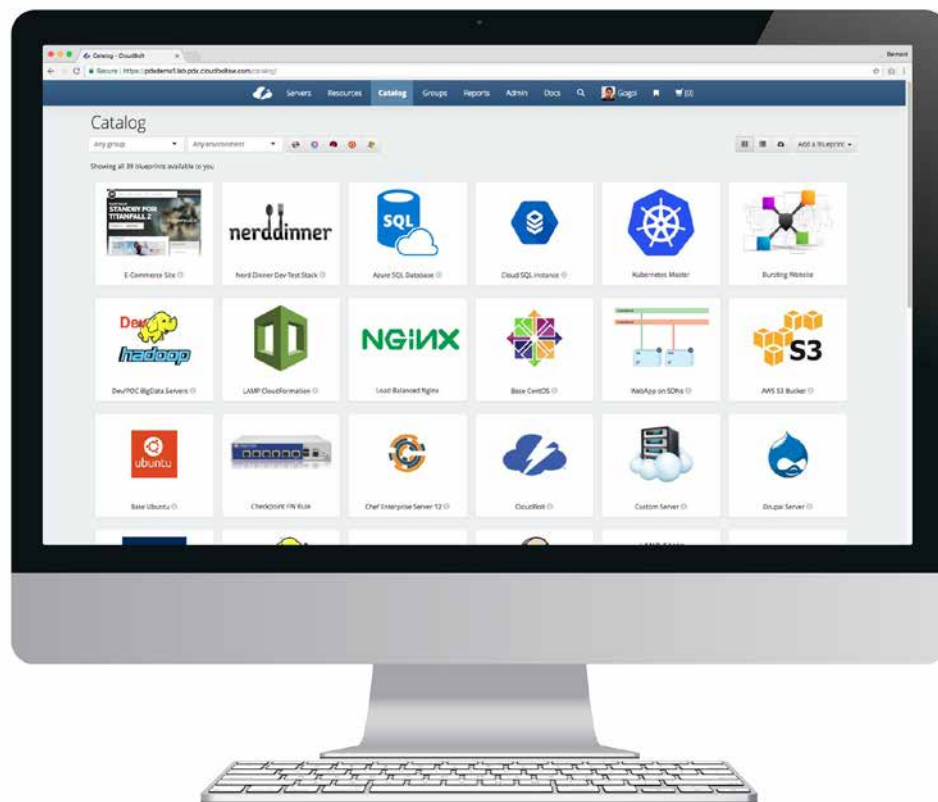
Guardrails Provide Control

To give IT admins confidence that end users can be entrusted with the power of self-service provisioning, assurances are needed that end users will not overprovision or otherwise misuse resources. CloudBolt allows admins to set up any combination of expiration dates, approval policies, resource limits and quotas per environment and per group. This enables, for example, a dev-test environment to have orders auto-approved but with a required expiration date and only small sizes available. A production environment, in contrast, could be set up to require approval but have a wider range of size options and no expiration date.

CloudBolt's ordering system is optimized to prevent user error and over-allocation. At the heart of this safety mechanism is the fact that the questions on the order form are controllable by the CloudBolt admins and are customizable per group, per environment and per blueprint. This enables admins to present only the questions that the user can answer and only the options that the user should be allowed to select. Complex sets of questions can be combined into "pre-configurations," so users are presented with higher-level choices that determine multiple different provisioning parameters at once.

Virtual Networks

CloudBolt allows users to take advantage of VMware NSX network virtualization and security platforms to rapidly create new virtual software-defined networks, practically out of thin air. NSX is complex and requires more networking knowledge than most users possess. CloudBolt encapsulates that knowledge into a CloudBolt blueprint and then provides it to end users so they can leverage the power of virtual networks without having to understand complex networking concepts.

Conclusion

CloudBolt provides VMware customers with self-service capabilities, a unified manager and an extensible framework that speeds up 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, resources with configuration standards, usage quotas and cost transparency.

CloudBolt Capabilities for VMware

Discoverable resources	VMs, clusters, datastores, dvSwitches, templates On VMs: annotations, HW resources, IP addresses, UUID, utilization
Continuous discovery and refresh	Discovery and full management of resources created outside of CloudBolt, plus updating of known resources (including changes initiated outside of CloudBolt).
VM customization	Using VMware's guest customization, Chef, Puppet, Ansible or remote scripts.
Supported VM management actions	Snapshot management, scaling up and down, inspecting utilization, running scripts, power control, accessing serial console, SSH and RDP from within the browser, managing NICs
Cross-cloud blueprints	CloudBolt blueprints can be set to be deployable to both VMware 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 administrators can model rates for virtualized HW, SW and misc costs. CloudBolt shows rate comparisons between environments when ordering, shows the rates on servers and environments, and also generates 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 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 infrastructure 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.
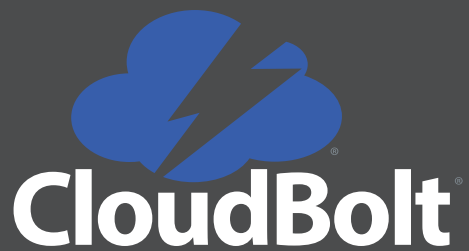
CloudBolt

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.