AWS MANAGEMENT TOOLS: WHAT'S AVAILABLE & HOW TO CHOOSE



When cloud computing was introduced to the masses, new startups and innovative startups were among the early adopters. Cloud vendors such as Amazon, Microsoft, and Google offered a myriad of cloud resources designed to run different types of IT workloads. The flexibility and variety of choice sharpened the appetite for a cloud-first business paradigm:

- Legacy applications and workloads were quickly relocating to the cloud.
- IT began building containerized apps and delivering services to a global user base via the internet.

The growing cloud adoption trend was quickly faced by IT management and governance challenges. According to research, solving the cloud governance challenge is the top priority for SMBs investing in cloud solutions. Large enterprises are equally concerned: 84% are worried about managing cloud spending.

Fortunately, large vendors such as Amazon Web Services (AWS) offer a vast library of cloud management and governance tools. In this article, we will explore the three categories of AWS cloud management solutions:

- **Enable:** Built-in governance control tools.
- **Provision:** AWS cloud management tools that allow users to allocate and use resources efficiently based on defined policies.
- **Operate:** Maximize the performance of your AWS cloud systems. Streamline governance and control, and ensure compliance.

(This tutorial is part of our AWS Guide. Use the right-hand menu to navigate.)

Enable tools

AWS Control Tower

Manages multiple AWS accounts and teams for your AWS cloud environment. Security, compliance, and visibility protocols extend to all accounts that are provisioned with a few simple clicks with the AWS Control Tower tool.

Benefits:

- Easy provisioning and configuration of multiple AWS accounts.
- Automate policy management: enforce rules, Service Control Policies (SCPs).
- Gain full dashboard visibility into accounts and policies.

AWS Organizations

Grow and scale your AWS environment by programmatically provisioning accounts, allocating resources, organizing workflows for account groups and simplifying the billing process for grouped accounts.

Benefits:

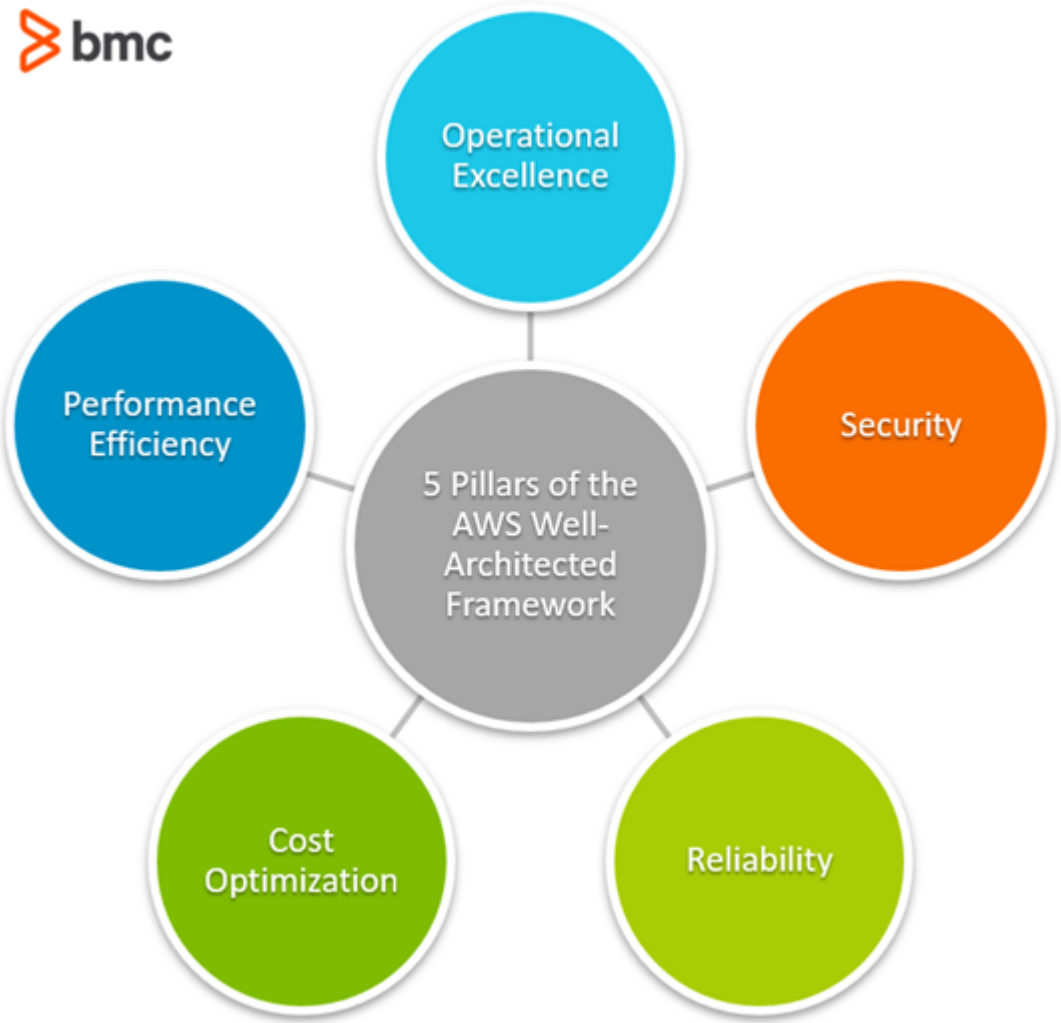
- Easily and quickly scale your AWS cloud environment.
- Central audit of scalable cloud environments.
- Simplified identity and access control systems.
- Optimize resource provisioning and reduce duplication with AWS Resource Access Manager (RAM) and AWS License Manager.

AWS Well-Architected Tool

Review existing workloads and compare your IT environment to the AWS architectural best practices. The tool uses the AWS Well-Architected Framework that allows users to develop secure IT networks optimized for multi-cloud environments.

Benefits:

- Free AWS cloud architecture guidance.
- Cloud workload monitoring for compliance to AWS architectural best practices.
- Identify performance bottlenecks, monitor workloads, and track changes.



Provisioning Tools

AWS CloudFormation

AWS CloudFormation provides a common language to provision foundational assets in your cloud instance. Using a basic text file, CloudFormation enables you to model and provision each asset required.

Benefits:

- Model your infrastructure from a single source: a text file
- Standardize the infrastructure for your entire organization in a simplified way
- Provisions can be automated and deployed over and over again without being rebuilt
- Demystify infrastructure by treating it like what it is: code

AWS Service Catalog

Enables users to oversee a robust index of services primed for use on AWS. With services that incorporate everything from virtual machine images, servers, applications and databases, AWS Service Catalog enables you to centrally administer programs. It empowers clients to rapidly deploy IT services they need, on-demand.

Benefits:

- Ensure your organization complies with industry standards
- Help users find IT services to deploy
- Manage IT services from one central point

AWS OpsWorks

Lets you write small instances of code to automate configurations. AWS OpsWorks main benefit is that it offers application and server management for Puppet, Chef, and Stacks; Chef and Puppet are automation platforms that allow you to use code to automate the configurations of your servers.

Using instances of Chef and Puppet designed for AWS, developers can deploy code that keeps their configurations in check. OpsWorks has three offerings:

- AWS OpsWorks for Chef Automate
- AWS OpsWorks for Puppet Enterprise
- AWS OpsWorks Stacks

AWS Trusted Advisor

AWS Trusted Advisor is a provisioning resource that provides on-demand, real-time guidance to AWS users that increases the overall performance of your AWS environment. It does this by optimizing the instance, recalibrating things that reduce cost, increase security, and more.

Benefits:

- Full access to a wide range of perks that optimize your AWS instance
- Increased security
- Fine-tuned performance
- Alerts and notifications

Operate Tools

Amazon Cloud Watch

Amazon CloudWatch provides monitoring administration services for AWS cloud resources and applications. Users benefit from the Amazon CloudWatch tool to gather and track data analytics, screen log records, set alerts, and respond to changes in your AWS assets.

Benefits:

- Amazon EC2 monitoring
- AWS resource monitoring
- Custom metrics monitoring
- Log monitoring and storage
- View data in visual reports
- React to resource changes
- Set alarms

Amazon CloudWatch can screen AWS assets, for example, Amazon EC2 occurrences, Amazon DynamoDB tables and Amazon RDS DB instances and custom metrics produced by your

applications and services.

AWS CloudTrail

An important operational tool, AWS CloudTrail helps enterprise businesses achieve compliance and track user activity. The service offers governance, compliance, operational and risk auditing of your account. Cloud Trail provides a comprehensive list of actions taken throughout AWS and aligned services.

Benefits:

- User activity is recorded in a secure log
- Compliance audits become easier with pre-stored event logs generated by the system
- Find areas where your system is vulnerable and monitor or fix them
- Security automation

AWS Config

Manage and audit configurations of your AWS environments and systems. The AWS Config keeps a repository of configuration records and evaluates them against optimal specifications.

It also tracks changes and dependencies between AWS resources. It helps users monitor the many configurations of their AWS instance and services—an otherwise time-consuming process. AWS Config offers assistance monitoring, assessing, auditing and evaluating configurations in one place.

Benefits:

- Continuously monitor and track configuration changes.
- Up to date with compliance and audit requirements.
- Manage changes at scale. Troubleshooting is simplified and can be automated.

AWS Systems Manager

AWS Systems Manager gives you full control of the framework on AWS. Systems Manager offers an impactful, easy-to-use UI so you can see operational information from various sources and automate tasks needed for smooth operation. With Systems Manager, you can assemble assets by application, monitor operational system info and activate resources.

Benefits:

- Ensures security and compliance
- Includes management of hybrid environments
- Full visibility of resource groups and configurations lets you have greater control
- Perfect for automation, easy-to-use
- Detect problems more quickly

Visit the AWS Management Tools homepage for more tools and detailed descriptions.

Third-party tools for managing AWS

In addition to the tools created by AWS, a number of third-party vendors offer resources for

provisioning, ops management, monitoring and configurations.

RightScale

RightScale is a multi-use tool that helps with operations management and provisioning. This tool is also used for monitoring governance and optimizing for cost. This cloud management platform offers users the ability to manage all their clouds from one UI.

SCALR

Similar to RightScale, SCALR has a number of functions that are helpful for users in an AWS environment. The aim of this service is to increase productivity, reduce cost, enhance security, and prevent common concerns such as vendor lock-in. All the while, offering a flexible environment for users on a public, private, or hybrid cloud.

Hybridfox

Hybridfox is a popular Chrome add-on that works with a number of IaaS/PaaS providers, including AWS. It can be used with public and private clouds. It's perfect for users who have multiple cloud environments because it allows for switching between them seamlessly.

Cloudability

Cloudability is a full-service cloud suite that offers users migration assistance, configuration management, and operations management. Cloudability helps to ensure governance and compliance needs are met, while offering a full suite of services to AWS users.

Ylastic

Ylastic is a cloud management service that focuses on managing user instances of AWS in an intuitive way and offering data analytic and backup options. Ylastic touches operations management, configuration management, security, compliance and more.

While the differences between some of these tools may seem small, something like red-flag resolution and alerts could make all the difference for enterprise business leaders. In many instances, it comes down to personal preference.

Overall, when purchasing any new services or applications, it's important to first take inventory of the unique needs of your business, then decide on the right course of action. Apart from choosing the right services, implementing an effective cloud management strategy is also of paramount importance.

Related reading

- BMC Multi-Cloud Blog
- What's AWS VPC? Amazon Virtual Private Cloud Explained
- Cloud Management Tools: Everything You Need To Know
- Protecting Your Data in the Cloud
- AWS Braket Quantum Computing: How To Get Started

- Cloud Governance Best Practices