



UNDERSTANDING **GOVERNANCE** WITHIN **AWS CLOUD**

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At GoDgtl, we help businesses establish robust cloud governance frameworks for hybrid, cloud, and multi-cloud environments, enabling companies to maintain compliance, democratize data, and support collaboration.



Introduction

Today, businesses are driving changes through Digital Transformation like never before. In such conditions, most strategic visions include a primary focus on cloud solutions that can deliver meaningful impact on both enterprise direction and cost. Cloud initiatives, cloud adoption, and cloud computing practices are interlinked and offer integrated governance solutions that include people, processes, and technology.

The best practices of cloud governance help maximize exposure, ensure compliance and maintain control. Governance practices are not just limited to the optimization of efficiency and costs. They also help develop safeguards for cloud-related activities that can affect financial resources, operations, and security.



What is Cloud Governance?

Briefly explained, cloud governance is a carefully designed set of rules and protocols that function in a cloud environment to boost data safety, manage risks, and keep processes running without issues. The convenience of using the cloud provides great comfort to businesses and customers alike. This also means that employees will have their own system of setting up resources into the cloud with the click of a mouse. That said, it is not ideal, as it gives rise to the notion of “Shadow IT” and can create problems with competing systems while increasing costs and reducing efficiency.



Amazon Web Services (AWS) is a leading cloud vendor with more than 30% of the cloud service market share, along with comprehensive and widely adopted cloud governance policies.

The convenience of the cloud also brings with it a new array of security issues. Even in the most secure cloud environments, deploying assets with poor accessibility controls or increased configuration vulnerabilities is possible. As a result, it can expose the entire system to an escalated risk of hacking. Additionally, it is important to note that there are no firewalls in the cloud, as there are on-premise IT solutions.

In 2020, around 76% of IT professionals worldwide reported that their companies were running apps via AWS, while another 12% were experimenting with AWS. **(Flexera, 2020)**

Recent statistics point to reasons for adopting strong cloud governance policies:

A robust cloud governance strategy ensures that coherent policies are in place to address both known and unknown challenges. Everything from asset deployment to systems interactions to data protection must be carefully considered, analyzed, and managed. The gradual transition from on-premise IT infrastructures to a cloud environment adds some complexity to the platform architecture. It also means that more people across an organization can impact that architecture.

The second top cloud service for 2020, where 63% of IT experts run their apps on Microsoft's Azure. **(Flexera, 2020)**

In the meantime, the top initiative among enterprises is how to optimize their cloud usage as expressed by 73% of responding organizations. Cost savings had been the top initiative for the past four years.



For these reasons, companies must develop and maintain a thorough cloud governance model. Implementing a governance plan is essential, whether a firm has just begun its cloud journey or has been operating in the cloud for some time. GoDgtl has a defined methodology for conducting day-to-day operations according to both published industry standards and AWS best practices. We can share the knowledge related to controlling costs, addressing security concerns, implementing automation, and utilizing cloud-native applications.

This is how business leaders see cloud usage in the coming years and why it is even more important to have a governance strategy in place right now:

- **75% CFOs to carry out a more agile business system**
- **50% of employers expect higher than normal cloud usage**
- **37% cloud spending will increase across all industries**

Using People & Processes for a CCoE–Cloud Center of Excellence

Cloud governance depends on a framework and model developed by cloud experts. It is preferably a group within an organization that provides leadership, best practices, and policies to drive cloud adoption. AWS helps define the strategy and scope of a functioning Cloud Center of Excellence (CCoE).

In terms of best practices, the CCoE “creates and maintains design principles and architectural best practices for designing and running applications in the cloud.” To help enable discoveries in this framework, AWS has produced its AWS Well-Architected Framework. This framework is based on foundational questions that help shed light on detailed and specific architecture alignments for AWS best practices.

It is also important to note that the CCoE framework is based on five pillars:



These will be further elaborated upon when we discuss the maintenance of a Well-Architected Framework by AWS.



Identify the workload to review

Then, answer a series of questions about your architecture.

AWS Well-Architected Tool

Review your answers against the five pillars established by the Well-Architected Framework.

Pillars:

- Operational excellence
- Reliability
- Performance efficiency
- Security
- Cost optimization

Additionally you can:

- Get videos & documentation related to AWS best practices
- Generate a report that summarizes your workload review
- View the results of workload reviews across your organization in a single dashboard

Importance & Key Benefits of Cloud Governance

It is self-evident that Cloud Governance policies make it easier to manage cloud resources. For example, major cloud service providers such as AWS advise customers to shift multi-tenant workloads from single cloud accounts to multiple accounts. This helps with precise cloud workload management, which is becoming a best practice in newer Cloud Governance modeling. Not only does this best practice policy help with volume and workload in accounts, but also in showcasing visibility around key cloud activities and trends supported by metrics.

Reduction in labor activities and minimizing resources is another component of a winning Cloud Governance strategy. This is achieved by adopting practices such as identifying and eliminating idle resources, optimizing and scaling computing services, leveraging tools to project resource demand, as well as planning the usage of applications that utilize resources only when required.

Cloud adoption statistics reveal that by 2020, a staggering **83% of the company workload will be stored on the cloud.**

In terms of cloud metrics, 77% of businesses utilize cost savings and efficiency as their top KPI for measuring cloud performance. *(Flexera, 2020)*

Lower security risk is a key benefactor from an enterprise-level Cloud Governance strategy. When an organization has committed to hosting or moving data to the cloud, it must develop the proper security protocols to protect that data. Hosting data in the cloud brings forward the inherent risks of data breaches and hacking attempts as well as unauthorized access.

The governance plan allows you to identify the vulnerable spots and have an action plan to eliminate risk proactively, and have in place the metrics to analyze and gauge the impact of established security policies.

Basic Cloud Governance Policy and Best Practices

Establishing a cloud governance program follows three basic phases:

Awareness: This is the beginning of the process. Organizations in this early stage have zero cloud structure and still depend on manual deployments of technology and assets. They might know that they want to transition to the cloud entirely, but they have minimal integrations and are just beginning to scope out cloud governance plans.

Early Adoption: In this phase, organizations have developed policies that match their needs and processes. They most likely have a cloud team in place and have scoped out costs and other architecture details. They are experiencing rapid cloud deployment.

Mature Adoption: In this final phase, organizations reap the rewards of the effort they applied in the previous phases. Their cloud management is now fully automated. It is responsive and agile, and the cloud governance framework enhances security and compliance.

This is why governance matters:

According to 74% of global IT decision-makers, 95% of all workloads will be in the cloud within the next five years. *(LogicMonitor, 2020)*

Cloud governance is the key to progress along with these three phases. Companies need to carefully audit their existing systems and develop a clear vision of their ideal cloud environment in the Awareness stage. This is the time to research, collaborate across teams, and make plans. Part of this exploration will include drafting a cloud governance plan.

Once that initial plan is developed, it is time to move into the Early Adoption phase. Cloud governance is dynamic. Teams should be prepared to come back to their framework recursively to assess compliance, scan for potential

vulnerabilities, and make improvements. Things move fast during Early Adoption, so it is critical that teams refer to and build on their cloud governance plan to ensure controlled deployments and constant attention to data security.

Finally, organizations transitioning into the Mature Adoption phase depend on their cloud governance to keep things running smoothly. This unifying framework keeps everyone on the same page and transforms the rush of Early Adoption into a reliable cloud experience for all stakeholders.

Maintaining a Well-Architected Framework

An organization's processes and procedures certainly help determine the efficiency of its cloud installation. But, additionally, they equally impact the underlying architecture and platform structure. AWS Well-Architected Framework enables cloud architects to build secure, high-performing, resilient, and efficient infrastructure for their applications and workloads.

Based on five pillars — operational excellence, reliability, performance efficiency, security, and cost optimization, AWS Well-Architected Framework provides a consistent approach for customers and partners to evaluate architectures and implement designs that can scale over time.

As an essential best practice, organizations must adopt and follow well-architected principles that ensure that cloud-based applications are nimble and resilient. The fundamental practices of AWS Well-Architected Framework are categorized as:



Operational excellence. To make workloads run effectively with operational excellence, perform all operations as code, develop apps incrementally with small changes, and refine processes frequently. The operational excellence pillar focuses on running and monitoring systems to deliver business value and continually improving processes and procedures. Key topics would include automating changes, responding to events, and defining standards and benchmarks to manage daily operations.



Reliability. Reliable applications should recover automatically, have distributed workloads, and utilize only the resources required for production workloads. The reliability pillar focuses on ensuring that a workload performs its intended function correctly and consistently when it is expected to. A resilient workload quickly recovers from failures to meet business and customer demand. Key topics include distributed system design, recovery planning, and how to handle change.



Performance Efficiency. Use server-less platforms that bring operational efficiency. Deploy workloads across regions to reduce latency. The performance efficiency pillar focuses on using IT and computing resources efficiently. Key topics include selecting the right resource types and sizes based on workload requirements, monitoring performance, and making informed decisions to maintain efficiency as business needs evolve.



Security. Implement a strong identity and access control to secure applications. The security pillar focuses on protecting information and systems. Key topics would include confidentiality and data integrity, identifying and managing who can do what with privilege management, protecting systems, and establishing controls to detect security events.



Cost Optimization. Leverage cloud financial tools to help monitor resource usage and cloud expenditure. Additionally, your organization should focus on core development and delegating non-core services to third-party vendors. The cost optimization pillar focuses on avoiding unnecessary costs. Key topics include understanding and controlling where money is being spent, selecting the most appropriate and right number of resource types, analyzing the overall expenditure over time, and scaling to meet business needs without overspending.



Cloud Governance in Your Organization

Cloud governance must be an ongoing process. Once the relevant policies are established, your organization will need to evaluate whether you are working further down the line. As your organization becomes more comfortable with your cloud environment, you will better understand how to run it. Because of this, policies may change to reflect new knowledge or incorporate new cloud solutions. Your governance framework needs to adapt to these factors as they arise.

According to the **2020 State of the Cloud Report**, the top three challenges for enterprises are security (83%), managing cloud expenditure (82%), and governance (79%).
(Flexera, 2020)

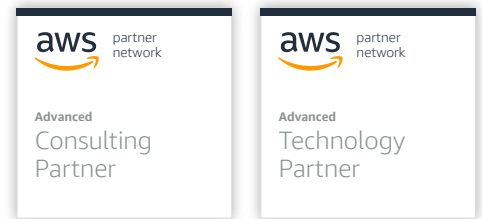
An organization will not achieve overnight cloud operations success. You will have to adjust your cloud strategy and policies as you move forward. Managing your cloud environment helps you understand how you need to adjust it. Cloud governance frameworks should be examined at various stages of the cloud adoption process, even years after the initial start. If you are not modifying your framework to account for new processes and better cloud expertise, your company will likely lose efficiency and productivity. Thus, your company needs to be flexible in how it governs your cloud operations.

AWS summarizes it best. "Governance in the cloud is a mix of processes, people, and technologies that drive cloud adoption and improve an organization's agility without compromising safety. Creating decentralized governance permits great control over standards and costs (safety) while allowing better responsiveness (agility)."

It is crucial to develop a critical mass of people with AWS experience and establish an operational CCoE dedicated to mobilizing the appropriate resources and defining best practices. Using the cloud, especially public cloud services such as AWS, means having the best-in-class tools and resources while ramping up your organization on cloud-centric policies, best practices, and adoption.

How Does GoDgtl Collaborate With AWS?

GoDgtl brings a team of experienced cloud experts who work directly with AWS to bring value and real solutions for your cloud projects. With direct access to AWS resources and in-house cloud consulting talent, GoDgtl is ready to guide you through your cloud journey regardless of where you are on that path. Whether it's more knowledge-based information on cloud topics such as security, or governance and compliance, or basic cloud migration aspects, or even if an assessment is needed, GoDgtl can provide a roadmap for your path to project completion and success.



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