

Ten Ways CoreStack Amplifies Native Hyperscaler Services for Model Cloud Governance

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How CoreStack helps your organization's cloud stay optimized, compliant, and secure



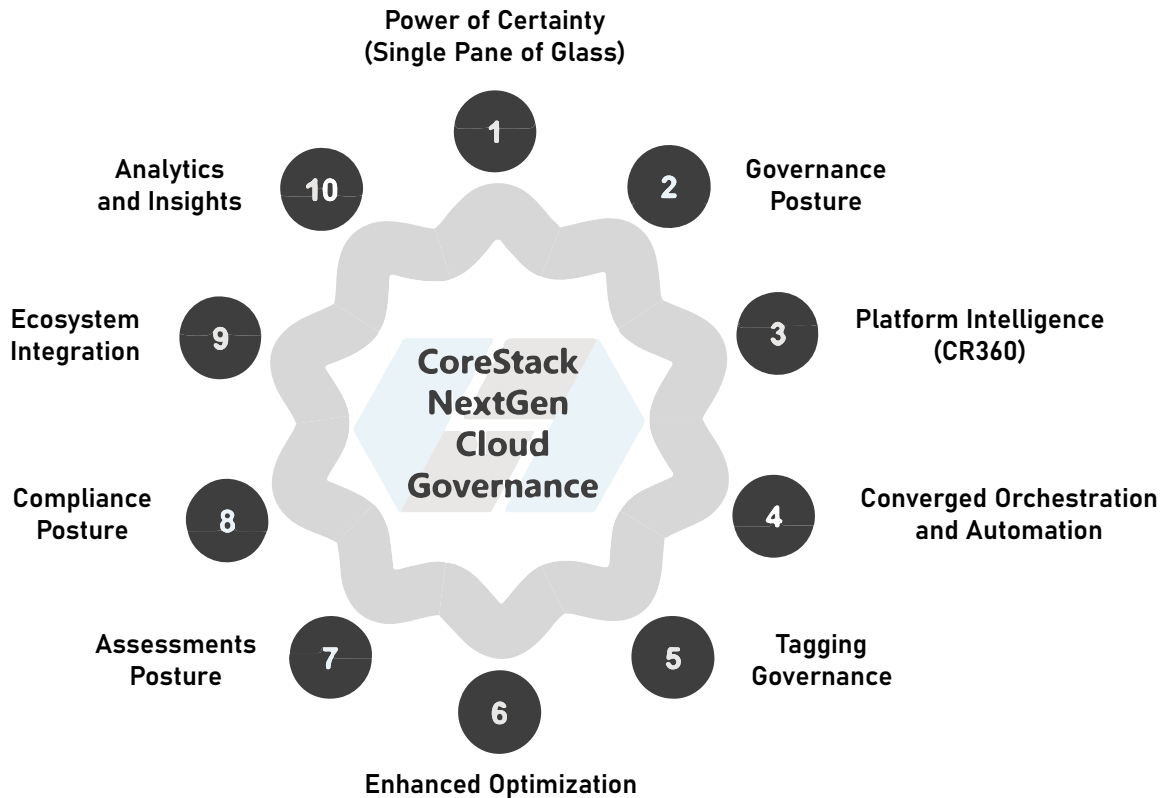
One question often asked is, “Are the cloud management tools offered by hyperscalers good enough to keep my organization as optimized, compliant, and secure as it could or should be?”

Although there is a degree of subjectivity in what we all deem “good enough,” the answer is no. I will say upfront that the portals or consoles provided by the prime cloud hyperscalers are good; of course they are. But they do have some shortcomings when looked at through the more sophisticated lens of multi-cloud, multi-account, and multi-workload optimization, compliance, and security. While cloud scale and speed can bring disproportionate potential value-add, they can also amplify poor cloud management practices. “Good enough” needs to become “great,” where siloed hyperscaler-based cloud management evolves to become multi-cloud governance. At that point, your cloud deployment becomes and remains model.

At CoreStack, cloud governance has a simple definition: Embracing the cloud with greater confidence. That includes the confidence to experiment more, innovate more, and accelerate delivering value to customers. It’s achieved by leveraging a governance framework that provides comprehensive optimization, compliance, and security controls to every facet of your multi-cloud environment. Cloud governance is the next evolution of cloud management, and depending on where you are in your cloud journey and how much you spend on the cloud, the degree to which the distinction matters becomes more profound. The higher the spend, the more clouds you embrace, and the higher the degree of democratization within your organization, the greater the sophistication you require and the stronger the case for cloud governance.

Inspired by a famous Peter Drucker quote on leadership, cloud management is about doing things right, whereas cloud governance is about doing the right things right. The latter is ever-more crucial in an increasingly connected digital world, where cloud spending, compliance, and security all wrestle for scarce resources – be those budget dollars, people, or both. There is little doubt that you need to do cloud management right, a requirement that has largely been satisfied by hyperscaler cloud management tools. However, the modern and digitally ambitious enterprise must apply a more sophisticated lens to all essential vectors of the cloud. This means doing the right things right, embracing every cloud capability with confidence, and moving from good-enough cloud management to next-generation cloud governance.

I assert that to become and remain a model cloud citizen, be that from a FinOps, SecOps, CloudOps, GreenOps, Well-Architected, or other perspective, you need more than simple, siloed cloud management tools from hyperscalers. In this white paper, I will explore ten ways CoreStack’s multi-cloud governance platform amplifies native hyperscaler services, delivering the capabilities that propel your posture from “good enough” cloud management to model cloud governance.





1. The Power of Certainty (Single Pane of Glass)

CoreStack's modern user experience provides you with the power of certainty through a single pane of glass across multi-cloud. This complete and holistic visibility enables rapid identification and remediation of issues, provides richer insights into the performance of your multi-cloud environment, and eliminates the need to switch between (and have skills on) multiple systems supporting siloed hyperscaler functionality – the portals within portals within portals syndrome. The CoreStack platform provides:

- The power of certainty via visibility across multiple cloud accounts/subscriptions/projects/customers. The single control plane enables in-screen recommendations and immediate remediation capabilities for any cloud account from any hyperscaler (AWS – Management/Linked Account; Azure – EA, CSP, CSP-In-Direct, PAYG; GCP – Billing Account, etc.).
- A holistic resource inventory view of all cloud accounts across multiple hyperscaler consoles, something that is typically difficult to execute. Additional integrations are also possible with third-party tools like ServiceNow CMDB.
- Out-of-the-box, customizable Executive Dashboards that offer deep and broad visibility across multi-cloud platforms, providing a next-gen user experience that enables more informed decision-making. These configurable dashboards offer actionable widgets and options for impactful visualization perspectives.



2. Governance Posture Adherence

CoreStack provides continuous multi-cloud governance posture, monitoring for accurate implementation and adherence to desired cloud guardrails and procedures through automated policies that are enforced through real-time posture drift detection, threshold violation alerts, and automated remediation. This comprehensive governance control plane is delivered through our OSCAR governance framework – Operations, Security, Cost, Access, and Resource governance:

- **Operations:** Run lean and efficient cloud operations (with automation) while achieving high infrastructure availability and optimal performance with rule-based automation and AIOps (monitoring, alerts, remediation, activity tracking, backup/restore, and patch management).
- **Security:** Continuously and autonomously assess security controls, identifying gaps and mitigating them with rule-based security and vulnerability configurations before they transform into business threats.
- **Cost:** Obtain actionable visibility into overall cloud spend, set up controls, and identify potential cost-saving opportunities. With budget and forecast visibility/tracking; optimization of orphaned, under-utilized, and idle resources; and configuration optimization, organizations can avoid the operational silos and shadow IT that can drive up cloud costs in no time.
- **Access:** Build accountability with unified access to visibility and insights into your cloud usage across different departments and roles, spanning multiple clouds and cloud accounts.
- **Resource:** Use a consistent approach to categorizing cloud resources for better visibility and control, as well as more accurate reporting, including rule-based resource consistency, tagging and naming standards, locks, and resource sizing.



3. Platform Intelligence (CR360™)

CoreStack's platform is built on the belief that it's essential to have a holistic 360-degree view of all cloud resources and their unique characteristics from the perspective of cost, compliance, security, policy, operations, assessments, associated dependencies, etc., in order to take informed and intelligent governance action. Having simply one perspective of a cloud resource from a single cloud provider could have consequential impacts when optimizing complex multi-cloud workloads with unknown dependencies. The CoreStack platform provides a single source of intelligence, richer capabilities, and the ability to embrace change faster and leverage new cloud capabilities immediately. The end-to-end CR360 perspective can best be explained using what we call the E5 framework:

- Embracing data from multiple cloud hyperscalers for comprehensive multi-cloud governance, be that AWS, Azure, GCP, OCI, or any combination thereof.
- Extracting data with a patented “connectorless” approach (performing resource discovery, orchestration, and management of multi-cloud services using standard declarative definitions without a need for a plugin). As a result, as hyperscalers add more cloud capabilities, change cloud characteristics, or support more standards, CR360 rapidly embraces and makes them available, bypassing typical time-intensive development cycles.



- Enhancing data to build out the inventory of all cloud resources. Cloud resources have hierarchies and characteristics, and, for each hierarchy, multiple dimensions, dependencies, and implicit and explicit relationships with other cloud resources. Once we have the inventory, we get the detailed properties of each cloud resource from the hyperscalers and build the associated relationships between them. We also get the corresponding billing data for the cloud accounts.
- Enriching data through connections with third-party tools. CR360 is not limited to data from hyperscalers – any data associated with a cloud resource can be captured from a hyperscaler or a connected third-party tool. CR360 can poll data from tools such as monitoring and vulnerability, making it even richer and more beneficial. Regardless of the source, we can analyze and present that information in a single unified dashboard that provides recommendations, remediations, and deep insights.
- Exposing data through a modern and functional user experience, providing the power of certainty through reports and dashboards that can be used for multiple cloud accounts/subscriptions/projects/customers, all in a single portal, with “in-screen” recommendations and the ability to remediate.

4. Converged Orchestration and Automation

Orchestration is the automated arrangement or coordination of multiple lower-level automation processes to create a seamless end-to-end workflow. CoreStack's converged orchestration framework enables the orchestration of complex heterogeneous infrastructure and services by task flow, workflow, stacks, policies, schedules, and event-driven actions through the definition of domain-specific languages. These DSLs support lifecycle operations such as provisioning, monitoring, logging, auditing, deprovisioning, and policies of various services. Some of the benefits of converged orchestration and automation are:

- Simplified execution of tasks and workflows, with the capability to chain multiple platforms, tools, and services
- Reuse of the standard templates available from cloud service providers
- Unified view for executing standard operating procedures
- The flexibility to define workflows
- Complete coverage of platform-supported services (1000+ automation templates from CloudFormation, Terraform, Mistral, etc.)



5. Tagging Governance

Current hyperscaler-native tagging does not provide an easy way to see what tags are available at the cloud account or tenant level, to auto-correct certain tags, or to ensure proper tags are defined to enable efficient budget tracking, usage tracking, and chargeback. CoreStack goes above and beyond with next-generation tagging capabilities:

- Enhanced tag visibility, including providing a list of tags and values available for all cloud objects (cloud account, K8 objects, etc.) and resources
- Tag baselining with support for tag rules for all cloud objects (cloud accounts and resource groups in Azure, K8 objects, etc.), enabling a consistent organization-wide tagging strategy across multiple cloud accounts and hyperscalers
- Tag posture drift detection (from baseline) and remediation support for cloud objects, K8 objects, etc. from within the CoreStack platform
- Holistic multi-cloud insights to identify missing tags or tags that aren't standardized/proper
- The ability to apply tags continuously at scale with support for bulk remediation
- The ability to build capabilities on top of cloud-native account management services like AWS organization and Azure management groups to group resources and apply custom tag enforcement policies
- A holistic tagging governance dashboard, with the ability to generate showback and chargeback reports for cost allocation



6. Enhanced Optimization

Cloud optimization is a crucial aspect of cloud governance, and one where there is a handsome dividend. By implementing a cloud optimization strategy, you can ensure that your migration to the cloud and your ongoing operations in the cloud continue to pay off both in the short term and over the long run. CoreStack goes above and beyond the cloud optimization capabilities you find with native hyperscaler management tools, whether optimizing cloud application performance, reducing latency, or maximizing resource utilization to balance cost with performance, security, compliance, and availability. CoreStack's enhanced optimization capabilities include:

- Optimization for cloud resource types not supported by cloud-native advisors (AWS RDS, DynamoDB, Azure MySQL Server, GCP BigQuery, etc)
- Advanced scheduling capabilities that monitor resource utilization patterns to recommend and execute dynamic runtime scheduling for auto-start/auto-shutdown
- Enhanced AI/ML usage-based resource optimization recommendations (rightsizing, identifying idle and orphaned resources, etc.) through a single pane of glass for multiple clouds and multiple accounts
- Automatic notification and email alert action through bi-directional workflow integration with third-party ITSM tools such as ServiceNow
- Automatic remediation directly from the CoreStack platform – or action through bi-directional workflow integration with third-party ITSM tools
- Enhanced granularity with budget and forecast management at the multi-cloud workload, cloud account, tag, resource type, environment, and cost center levels, including holistic multi-cloud visibility through executive reporting on budget vs. forecast vs. variance (with drill-down), and advanced threshold alerting and automated action/remediation for greater forecast accuracy



7. Assessment Posture

It's good business practice, cloud practice, and common sense to use the best practices expertise and recommendations from hyperscalers, specialist partners, specific industry verticals, and even your custom frameworks to assess any architectural workload drift and auto-remediate as recommended at scale. The CoreStack posture assessment platform comes equipped with all hyperscaler well-architected frameworks as well as the ability to upload existing frameworks or create custom assessments. This all-in-one assessment posture platform/engine provides:

- The ability to perform (and schedule) automated architectural assessments using hyperscaler best practice frameworks (Well-Architected Framework pillars of operations, security, cost, reliability, and performance) and other industry standards without using cloud-native policies that are chargeable to the customer
- The ability to execute assessments at the cloud, account, tier, and workload level, providing unparalleled flexibility and accommodating the perspectives of all organizational hierarchies
- Extensive automation – every control in every cloud that can be automated is automated, resulting in a considerable reduction in effort, time, and expense
- Remediation suggestions based on hyperscaler best practices and AIOps, with the ability to auto-remediate/integrate with existing ecosystem ITSM workflows and tools
- A seamless collaboration workflow for manual controls, driving accountability and resolution and eliminating excuses for overlooking recommendations
- Essential milestone evidence that tracks trends from good to great, with comprehensive measurement that provides clear benchmarks and drives continuous improvement



8. Compliance Posture Adherence

Compliance is a constant challenge, given the pace and scale of change, the democratization of empowerment inherent with the cloud, and the sheer number and complexity of compliance bodies, standards, and controls. Compliance, too often, is seen as a necessary evil and expense. A wise person once said if you think that compliance is expensive, try non-compliance. The reality is that all companies that leverage the cloud need to be great at cloud compliance, and you are only as compliant as the last time you checked!

When it comes to compliance, “good enough” isn’t. CoreStack has embraced the compliance posture challenge head-on, with patented technology to ensure the very best multi-cloud compliance posture adherence. CoreStack is laser-focused on meeting external regulatory and legal requirements, external standards, and regulations related to data protection, privacy, security, and other industry-specific requirements – such as FedRAMP for federal agencies. CoreStack’s compliance capabilities that go above and beyond native hyperscaler tools include:

- Support for 24 regulatory standards (FedRAMP, ISO 27017, etc.), combined with extensive policy coverage out of the box (2,100 policies at last count), enabling greater, faster, and more consistent compliance posture for all cloud controls
- A manual compliance workflow built-in for greater accountability
- Patented AC3 (Abstracted Cloud Compliance Controls) capability that allows you to use a single assessment to get posture for multiple standards, establishing the delta between one standard and another and enabling faster and more complete compliance
- A control service that maps to multiple standards, which also enables faster and more complete compliance

9. Ecosystem Integration

Ecosystem integration is a crucial aspect of cloud governance. It enables companies to integrate the existing core business processes and systems with best-of-breed ecosystem partners. Additionally, it allows companies to fully and rapidly embrace new technologies that previously required cumbersome and time-consuming effort, reducing the reliance on outdated legacy and home-grown software that struggles to front the digital innovation curve. CoreStack sees these integrated ecosystems as an opportunity to provide real-time insights and governance across platforms, providing the following capabilities:

- Parity bi-directional integration across multiple cloud providers – AWS, GCP, OCI, Azure, and VMware, as well as numerous industry-standard enterprise systems, such as ServiceNow, Jira, Qualys, AppDynamics, Zoho, Zabbix, Nagios, and others, streamlining and automating remediation recommendations using existing change control/workflow processes
- Integration with crucial cloud compliance standard authorities, such as GDPR, NIST, CIS, FedRamp, and PCI, shipping with 24 standards and more than 2,100 policies
- Integration with DevOps CI/CD pipelines to provision and manage cloud infrastructure through customizable templates and scripts, orchestrating tasks across multiple cloud resources through Blueprints, which leads to faster and more efficient deployment and management of resources
- Service chaining technology, creating custom workflows that enable preventive guardrails, avoid cost leakage, and execute recommended remediation actions
- Comprehensive service health monitoring through the ability to integrate multiple hyperscaler service health dashboards, allowing a user to customize which services they want to monitor, receive alerts on, and auto-resolve through ITSM integration



10. Analytics and Insights

CoreStack delivers a dynamic dashboard tool called Executive Dashboards to help users create dashboards with the data and visualizations of their choice. Executive Dashboards provide rich analytics, both broad and deep visibility, a birds-eye view, and granular, actionable insights across your multi-cloud infrastructure.

With focused perspectives – CEO, CFO, CIO, CISO, architect, and others – CoreStack enables more informed decision-making through a configurable dashboard user experience. With Executive Dashboards, users can:

- Customize and create new dashboards with pre-defined cost widgets to suit your needs. Use the drill-down capabilities to go from a summary view to a resource-level actionable view, with the capability to export (and import) any given dashboard as a JSON file.
- Understand what's urgent and essential, such as budgets not to be exceeded, under/overperforming entities, and security violations vis-a-vis industry and compliance standards.
- See major KPIs, such as percentage spend MoM/QoQ/YoY across cloud providers, service consumption, and tags.
- Quickly benchmark performance parameters with other business units and peer organizations at multiple levels.
- Leverage multi-cloud data views, such as spend by cloud, tenant, cloud account, product category, region, and tagged and untagged resources; cost trending, cost anomaly, and cost summaries by cloud, spend, region, and tenant; and forecast and budget drift at multiple hierarchy levels.



NextGen Cloud Governance from CoreStack

No matter your level of cloud maturity, CoreStack can help you Cloud with Confidence. CoreStack dramatically improves visibility into cloud resources and enables enterprises to make better, more informed decisions. Our NextGen Cloud Governance portfolio can transform any organization from a reactive posture to a proactive one, enabling predictable increases in top-line revenues and bottom-line efficiencies while fully realizing the competitive advantage of the cloud's variable-cost model. To get started or to learn more, visit www.corestack.io or reach out to us at contact@corestack.io.



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