## EY Administration and Workplace Services Cloud Security Guardrail Design and Compliance Metrics

Broad security monitoring solution for industries





# Cloud misconfigurations are leading to costly data breaches

- COVID-19 pandemic has pushed businesses to move to a workfrom-home model practically overnight, altering the enterprise landscape for 2021 and beyond. Companies in various stages of cloud adoption are struggling with defining and enforcing security and compliance requirements for cloud services deployed across cloud environments.
- Organizations that were already struggling to manage and secure their physical IT infrastructures that had expanded with mobile and IoT devices now have to face additional challenges.
   As a part of the cloud transformation journey, they have to identify which native and third-party tools will be used to detect and remediate high-risk service and architecture settings within cloud environments.
- According to a study conducted by Gartner in 2019, "By 2025, 90% of the organizations that fail to control their public cloud use will inappropriately share sensitive data" as experts believe this could lead to leakage and compromise of sensitive corporate data. Moreover, moving to the cloud has further intensified an already obscure and problematic task visibility and control of what connects to the corporate network.
- According to the 2020 Trustwave Data Security Index report, 96% of organizations across the globe plan to transfer sensitive data to the cloud within the next two years. Therefore, the chief information officers (CIOs) have to deal with the enormous task of developing a robust enterprise strategy even before implementing the cloud or risk the aftermath of an uncontrolled public cloud as breaches could get even uglier in an insecure cloud environment.

## Benefits of EY Administration and Workplace Services Cloud Security Guardrail Design and Compliance Metrics solution

- Safeguard cloud infrastructure to protect organizations from data breaches just like how guardrails along the interstate highways keep drivers safe
- Help enforce compliance with defined standards for specific resource configurations and improve the business's cloud security posture by mapping guardrails to control frameworks
- Eliminate alert fatigue and human error associated with the manual identification, prioritization and remediation of cloud misconfiguration
- Increase remediation speed and support real-time analytics to stay on top of the potential misconfigurations and vulnerabilities in your cloud environment
- Proactively auto-remediate new misconfigurations with a given rule at real-time speed to improve cloud governance
- Provide automated support for defined security standards to drive action and support compliance objectives
- Utilize Microsoft-native capabilities for cost reduction, ease-ofuse and improved integration with the overall Microsoft ecosystem
- Help developers and engineers to be innovative and agile by providing a safe operating framework, without any unintentional compromise on security

## A proactive automated approach to high-risk configuration remediation

EY teams are helping organizations to design and build auto-remediation capabilities with Microsoft Azure environments to remediate high-risk misconfigurations based on defined security standards and compliance frameworks so they can securely operate in the cloud. Our full range of security capabilities helps clients secure cloud environments in a more proactive, preventative approach versus a reactive, manual approach to remediating security events.

The EY Cloud Security Guardrail Design and Compliance Metrics solution is part of the EY Cloud Security product suite, built on the EY Cloud Security Framework. The guardrail design service is architected to utilize Microsoft-native security capabilities built within the Microsoft family of services.

#### Target audience:

- Chief information security officer (CISO)
- Chief information officer (CIO), technology principal
- Chief transformation officer (CTO)
- · Cloud security director
- Information security director
- Business owners

#### Target industries:

- Advanced manufacturing and mobility
- Agriculture
- · Life sciences
- Consumer products and retail
- · Oil and gas
- Power and utilities
- Energy
- Chemicals
- Media and entertainment

#### Key functionality

EY Administration and Workplace Services Cloud Security Guardrail Design and Compliance Metrics solution helps consumers get more visibility into high-risk cloud configurations and map guardrails to control frameworks to provide compliance metrics.

Event trigger (i.e., configuration change) initiates the configured guardrail to remediate the noncompliance configuration setting

#### Microsoft Azure service



Default out-of-the-box Microsoft Azure Policy

Custom Microsoft Azure Policy

Event trigger

Function app

Microsoft Azure policy

Custom function app (Python, C#, PowerShell) remediates the configuration setting

### Event triggers include:

- Activity log event
- Azure Security Center finding

Azure Logic Apps

Logic App written in PowerShell remediates the configuration setting.

Baseline security standards for all cloud services

- Use out-of-the-box capabilities or custom auto-remediation services to define guardrails
- Design patterns based on defined baselines for secure architectural and engineering solutions

#### Client success stories: EY Administration and Workplace Services Cloud Security Guardrail Design and Compliance Metrics in action

EY teams were engaged by a large American international life sciences company to mature their cloud security monitoring and response capabilities. The objective of the collaboration between the client and EY teams was to deploy cloud security guardrails within it's Microsoft Azure environment to automatically enforce defined security and compliance requirements, while reducing the load on their limited cloud security team.

## Client challenges

- Lack of cloud security knowledge and skillsets within the current operating model
- Current state cloud security tools not monitored or operationalized
- Inability to detect and respond to misconfigurations within Microsoft Azure environments

## Strategy

- Identified cloud security requirements based on defined security policy and standards
- Deployed guardrails within Microsoft Azure Policy and automated remediation tools utilizing Microsoft Azure Logic Apps and Microsoft Azure Functions
- Helped detect and remediate nonapproved IP addresses within PaaS SQL servers, secure protocol usage and public IP compute enforcement

#### Results

- Automated remediation capabilities deployed with logging and metrics for efficiency
- Improved visibility into overall compliance within Microsoft Azure subscriptions
- Trained existing cloud security team members and provided operational playbooks for ongoing maintenance
- Provided Infrastructure-as-Code (IaC) code to cloud operations teams

## EY and Microsoft

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For more information, visit: ey.com/microsoft.

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