Avyka

Case Study

Standardizing Infrastructure Across 19 AWS Accounts Using Harness IaCM

CUSTOMER OVERVIEW

The client is a high-growth organization managing a complex cloud footprint spread across 19 AWS accounts. To maintain their competitive edge, they rely on a robust infrastructure that supports rapid scaling and diverse environment requirements.

As their cloud presence expanded, the need for a unified approach to infrastructure management became critical to ensure security, compliance, and operational agility across their entire ecosystem.

Understanding the Challenges

The platform team was managing infrastructure with no consistent structure or governance, leading to significant operational friction. The lack of a centralized strategy created a "snowflake" environment where each account operated under different logic.

Fragmented Environments

Inconsistency across 19 unique AWS accounts.

Manual Workflows

Reliance on manual provisioning that slowed down deployment cycles.

Hardcoded Blocks

Terraform resource blocks were hardcoded, limiting reusability and scalability.

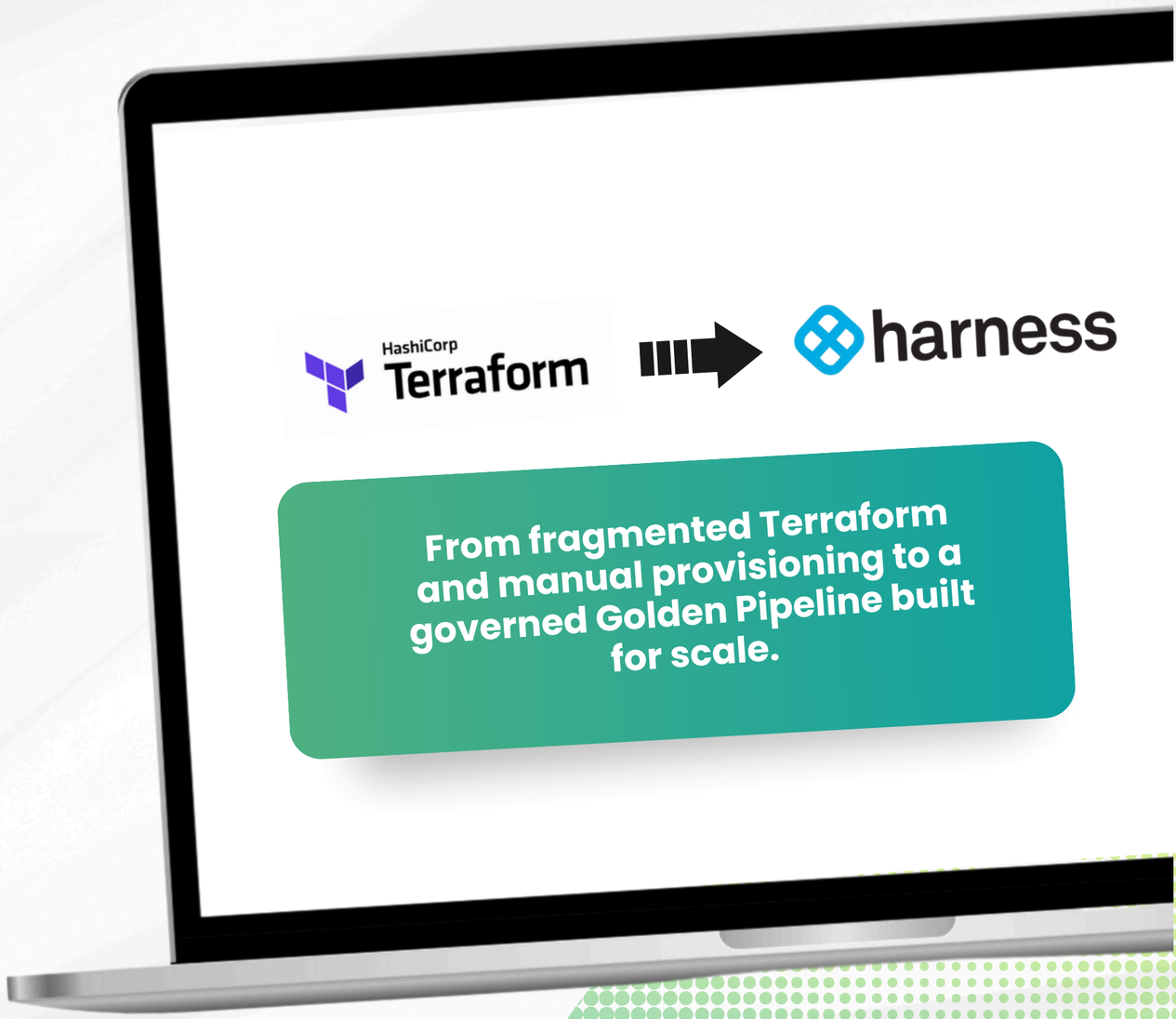
Tool Silos

Limited integration between Terraform (provisioning) and Ansible (configuration).

Operational Risk

High risk of configuration drift and complex troubleshooting.

To maintain agility and cost-effectiveness, the company needed a scalable, well-governed DevOps platform that would eliminate these inefficiencies while improving developer productivity.



The Avyka Approach

Avyka leveraged Harness Infrastructure as Code Management (IaCM) to architect a "Golden Pipeline," standardizing infrastructure delivery and embedding governance into the core of the client's operations.

Solutions

- **Modular Architecture:** Moved from hardcoded resources to a modular, config-driven Terraform structure.
- **Centralized Config:** Utilized terraform.tfvars for centralized configuration management.
- **State Security:** Implemented secure S3 backends for reliable state management.
- **Orchestrated Workflows:** Built Harness pipeline stages that seamlessly orchestrate both Terraform and Ansible.
- **Dynamic Integration:** Developed dynamic EC2 IP extraction to feed infrastructure data directly into Ansible workflows in real-time.

What We Did

After migrating to Harness, the company achieved significant improvements in several key areas:

Re-architected Infrastructure

Replaced rigid, hardcoded resources with reusable, modular components to support multi-account scaling.

Built a Golden Pipeline

Established a standardized provisioning process that enforces governance across every environment.

Integrated Workflows

Unified the stack by connecting Terraform and Ansible into a single, automated end-to-end system.

Results

The transition to a governed, automated pipeline transformed the client's infrastructure capabilities:

- **Zero Configuration Drift:** Eliminated manual touchpoints and unauthorized changes.
- **Reduced Provisioning Time:** Accelerated environment setup through full automation.
- **Centralized Control:** Unified visibility across all 19 AWS accounts.
- **Enhanced Reliability:** Improved troubleshooting with real-time logs and standardized error handling within Harness.
- **Scalable Governance:** A repeatable framework ready for the next 20+ accounts.

ABOUT AVYKA Avyka is a dedicated system integrator specializing in harnessing the full potential of Harness to revolutionize cloud infrastructure and enhance DevSecOps practices.