Slide 1: Title Slide

[DIAGRAM: HSBC Logo prominently displayed at the top or bottom corner]

Title: Driving DevOps Excellence at HSBC: Automation Strategies with Ansible and “G3”

Subtitle: Streamlining Software Delivery for Agility, Reliability, and Compliance

Presented by: [Your Name/Team Name]

Date: July 2025

Slide 2: Agenda

\* The DevOps Imperative at HSBC

\* Understanding Ansible in HSBC DevOps

\* What is Ansible?

\* Ansible’s Role in CI/CD Pipelines

\* The Automation Workflow (Build to Deployment)

\* Introducing “G3”: HSBC’s Enhanced Automation Platform (Hypothetical)

\* What is “G3”?

\* Key Capabilities & Design Principles

\* Ansible vs. “G3”: A Synergistic Approach

\* Complementary Strengths

\* When to Use Which?

\* Benefits & Future Outlook

\* Q&A

Slide 3: The DevOps Imperative at HSBC

[DIAGRAM: A simple infographic showing arrows forming a loop: Plan -> Code -> Build -> Test -> Release -> Deploy -> Operate -> Monitor -> Plan…]

\* Market Demands: Rapid innovation, personalized customer experiences, and quick response to market changes.

\* Regulatory Landscape: Stringent compliance requirements (e.g., RBI guidelines, financial regulations) demand auditable, secure, and consistent operations.

\* Scale and Complexity: Managing thousands of applications, diverse infrastructure (on-prem, multi-cloud), and a global workforce.

\* Key Goals for DevOps:

\* Accelerated Time-to-Market: Deliver features faster.

\* Enhanced Reliability: Reduce deployment failures and downtime.

\* Improved Security Posture: Embed security from design to operation.

\* Cost Optimization: Automate repetitive tasks, reduce manual effort.

\* Auditability & Compliance: Maintain clear records of all changes.

Slide 4: Understanding Ansible in HSBC DevOps

What is Ansible?

\* Agentless Automation Engine: Communicates over SSH (Linux/Unix) and WinRM (Windows), requiring no client software on managed nodes.

\* Idempotent: Running playbooks multiple times yields the same result; tasks only execute if the desired state is not met.

\* Declarative: Describes the desired state of the system, not the procedural steps to get there.

\* YAML-based: Simple, human-readable language for defining automation tasks (Playbooks).

\* Extensible: Rich module ecosystem for interacting with various systems, clouds, network devices, and applications.

Slide 5: Ansible’s Role in HSBC’s CI/CD Pipeline

[DIAGRAM: Flowchart showing: Code Commit -> CI Tool (Jenkins/Azure DevOps) -> Build & Test -> Artifact Repo -> CD Trigger -> Ansible Automation Platform -> Inventory -> Playbooks -> Target Servers (Dev/UAT/Prod)]

\* Configuration Management: Ensuring consistent configuration of servers, middleware, and applications across environments.

\* Application Deployment: Automating the delivery of built artifacts (JARs, WARs, Docker images) to target environments.

\* Infrastructure Provisioning (Hybrid Cloud): Provisioning and configuring VMs, network components, and storage on-premise and across cloud providers.

\* Orchestration: Chaining together complex tasks across multiple systems (e.g., deploy application, then update load balancer, then run post-deployment tests).

\* Security Configuration: Implementing security baselines, managing firewall rules, and certificate deployments.

\* Compliance Enforcement: Regularly auditing and enforcing desired configurations to meet regulatory standards.

Slide 6: Ansible Automation Workflow at HSBC: Build to Deployment

[DIAGRAM: Detailed workflow diagram with arrows connecting the following stages/components:]

\* Code & Commit: Developers push code to Git (e.g., Azure DevOps Repos).

\* Description: Application source code, Ansible playbooks, and environment configuration files are version-controlled.

\* CI Build & Artifact Generation: CI Pipeline (Jenkins/ADO) triggered.

\* Description: Code compilation, unit tests, static analysis. Creation of deployable artifacts (e.g., WAR files, Docker images).

\* Artifact Repository: Store versioned artifacts (e.g., Nexus, Artifactory).

\* Description: Centralized, immutable storage for all deployable components.

\* Inventory Management: Dynamic Inventory Scripts linked to CMDB/Cloud APIs.

\* Description: Real-time population of host information, grouping servers by environment, application, and role. Crucial for targeting.

\* Ansible Automation Platform (AAP): (Previously Ansible Tower / AWX)

\* Description: Centralized management, RBAC, credential storage, job scheduling, API for CI/CD integration, detailed auditing.

\* CD Trigger & Playbook Execution: CD Pipeline triggers AAP job. AAP fetches playbooks.

\* Description: Selects target environment based on pipeline stage (Dev, UAT, Pre-Prod, Production).

\* Target Environments: (Servers, VMs, Containers – On-Prem & Cloud)

\* Description: Ansible connects via SSH/WinRM.

\* Configuration & Deployment: Ansible applies configuration, deploys application.

\* Description: Playbooks execute tasks: OS setup, middleware config, application deployment, service restarts, health checks.

\* Monitoring & Validation: Post-deployment checks, integration with monitoring tools.

\* Description: Ensures successful deployment and application health.

Slide 7: Introducing “G3”: HSBC’s Enhanced Automation Platform (Hypothetical)

[DIAGRAM: A stylized logo for “G3” (e.g., three interlocking gears or a stylized “G” with data flowing around it)]

\* What is “G3”?

\* In a large enterprise like HSBC, “G3” would likely represent an internal, custom-built or heavily integrated automation platform designed to address specific HSBC needs beyond what off-the-shelf tools provide.

\* It’s a “Platform of Platforms” that orchestrates and provides guardrails for underlying automation engines.

\* Purpose: To provide a unified, secure, and compliant automation experience across diverse technology stacks and regulatory requirements within HSBC.

\* Key Capabilities & Design Principles:

\* Enhanced Governance & Compliance: Built-in approvals, policy enforcement, segregation of duties, and detailed audit trails tailored to financial industry regulations.

\* Complex Workflow Orchestration: Ability to manage multi-stage, cross-domain automation workflows (e.g., involving network changes, security policies, and application deployments in a single, atomic operation).

\* Unified Service Catalog: Self-service portal where teams can request pre-approved infrastructure or application deployments, abstracting underlying complexity.

\* Deep Integration with HSBC Ecosystem: Seamless integration with internal CMDBs, identity management systems, security tools, and proprietary monitoring platforms.

\* Advanced Reporting & Analytics: Dashboards for operational insights, compliance reporting, and performance metrics across all automation activities.

\* Layered Security: Incorporates HSBC’s stringent security standards, potentially including secrets management, privileged access management (PAM) integration, and data encryption.

\* Error Remediation & Rollback: Automated or guided rollback capabilities for complex deployments.

Slide 8: Ansible vs. “G3”: A Synergistic Approach

[DIAGRAM: A Venn Diagram. Left Circle: “Ansible Capabilities”. Right Circle: “G3 Capabilities”. Overlap Area: “Synergistic Benefits”]

\* Ansible Capabilities (Left Circle):

\* Core Automation Engine: Idempotent task execution.

\* Agentless Infrastructure: SSH/WinRM based.

\* Declarative Playbooks: YAML-based for simplicity.

\* Extensive Module Library: Broad coverage for OS, network, cloud, apps.

\* Configuration Management: Focus on desired state.

\* Open Source Core: Community-driven innovation.

\* “G3” Capabilities (Right Circle):

\* Enterprise Governance & Controls: Built-in compliance and audit.

\* Complex Workflow Orchestration: Cross-domain, multi-step processes.

\* Unified Service Catalog: Self-service for internal teams.

\* Deep Internal System Integrations: CMDB, IAM, bespoke tools.

\* Advanced Analytics & Reporting: Business-level insights.

\* Tailored Security Policies: HSBC-specific security enforcement.

\* Synergistic Benefits (Overlap Area):

\* “G3” leverages Ansible as its primary execution engine: Ansible performs the low-level automation tasks.

\* “G3” provides the enterprise wrapper around Ansible: Adding governance, orchestration, and integrations specific to HSBC’s scale and regulatory needs.

\* Reduced Friction: Developers use a streamlined “G3” interface, unaware of the underlying Ansible complexity.

\* Ensured Compliance: All Ansible runs are routed through “G3,” ensuring policies are always applied.

\* Single Pane of Glass: A consolidated view for all automation activities within HSBC.

\* Accelerated Self-Service: Teams can provision and deploy resources adhering to corporate standards effortlessly.

Slide 9: When to Use Which?

\* Use Ansible (directly or via AAP):

\* General Configuration Management: Setting up new servers, installing software, managing user accounts.

\* Simple Application Deployments: For less complex applications or development environments.

\* Patching & Updates: Routine maintenance tasks.

\* Ad-hoc Automation: Quick scripts for troubleshooting or one-off tasks.

\* Role Development: When developing new Ansible roles and modules for reusability.

\* Lower Environments: Often used more directly in Dev/Test environments before strict “G3” controls are required.

\* Use “G3” (which orchestrates Ansible):

\* Production Deployments: Any change going to production environments must go through “G3” for audit and approvals.

\* Complex Multi-System Orchestration: Workflows involving networking, security, databases, and application tiers.

\* Self-Service Catalog Requests: When teams need to provision standard environments or deploy certified application versions.

\* Cross-Departmental Workflows: Requiring approvals from different teams (e.g., security, operations).

\* Compliance-Critical Operations: Any automated task requiring strict adherence to regulatory guidelines.

\* Unified Reporting & Dashboarding: For centralized visibility and auditing.

Slide 10: Benefits & Future Outlook

Benefits of a Combined Approach:

\* Operational Efficiency: Significant reduction in manual effort and human error.

\* Speed & Agility: Faster delivery of software and infrastructure changes.

\* Enhanced Security: Automated enforcement of security policies and configurations.

\* Auditability & Compliance: Comprehensive trails of all changes, crucial for regulatory reporting.

\* Consistency & Reliability: Uniform environments across the organization.

\* Developer Empowerment: Self-service capabilities reduce dependencies on operations teams.

Future Outlook:

\* Increased AIOps Integration: Leveraging AI/ML for predictive issue identification and self-healing.

\* Broader Coverage: Extending automation to more network devices, security tools, and SaaS applications.

\* Enhanced Observability: Tighter integration with monitoring and logging platforms for real-time feedback.

\* “Everything as Code”: Further codifying all aspects of infrastructure and operations.

\* Continuous Improvement: Iterative refinement of automation playbooks and “G3” capabilities based on feedback and evolving needs.

Slide 11: Q&A

[DIAGRAM: A simple “Questions?” icon or a thought bubble]

\* Your Questions

\* Discussion

Remember to add high-quality, professional diagrams and HSBC branding elements to each slide to make it truly industry-level.