SECURE CLOUD INVESTMENTS WITH STRONG CLOUD INFRASTRUCTURE VALIDATION FROM INFOSYS

Organizations are migrating application workloads onto cloud for efficient business operations. Cloud provides scalable computing resources, tight security standards, fast data back-up and restoration, and several other features. With many cloud service providers in the marketplace, it is essential to have a cloud-agnostic platform for cloud infrastructure validation. This is particularly important for organizations that grapple with:

- Limited understanding of landscape complexity

- Delayed delivery timelines due to inadequate testing

- Incorrect or untested workload migration patterns owing to:

  - Incorrect set-up of foundation and landing zones

  - Automation tooling computability and integration issues

  - Absence of functional test scripts

  - Inability to meet performance expectations on cloud

  - Data model design issues

Cloud infrastructure validation helps protect the brand value of an organization while helping prevent cloud scalability issues, server breakdown, and security breaches.

The Infosys Solution

Infosys Cloud Infrastructure Validation (ICIV) is a platform that conducts cloud readiness assessments and non-functional validation for cloud platform build by making use of innovative technology and is plug and play with any cloud platform. It is cloud-agnostic, cost effective, and uses the latest technology for automation testing. This platform combines various tools and

reusable code under one umbrella to validate cloud platform for readiness check, monitoring, AI-based trends, predictions, and cloud security. The solution is exclusively for cloud infrastructure validation and platform validation.

Infosys Cloud Infrastructure Validation (ICIV) is a comprehensive platform with the following modules:

1. Cloud Configuration Validation – This includes platform readiness validation and cloud server build validation. It also adheres to specific requirements.

Key features are:

- Pre-defined templates for 23 cloud services

- Over 350 check points

- One-click as well as concurrent validation

- Interactive test results

- Auto defect management

2. Monitoring – This involves native monitoring of instances and containers and offers observability from logs. It allows to set alerts for any breach of threshold limits. It also performs trend analysis for seasonality checks and provides AI based prediction for effective planning.

Key features include:

- 18 pre-configured matrices

- Controlled access to data

- Views available from Grafana

3. Resiliency – ICIV simulates different types of attacks for various requirements. This includes static attacks on resources to check performance, dynamic attacks to simulate real-time usage of resources, and container-level chaos attacks. It also helps users observe matrices.

Key features are:

- Chaos Engineering Orchestration

- CPU attack

- Memory bloating

- Disk flooding

- Network delay simulation

- Process (fake death)

- Container-level experiments (CPU, memory, disk, network, and process)

4. Cloud Security – This module supports early identification of misconfigurations and security risks. It also conducts cloud compliance scans for Amazon Web Services (AWS), Azure, and Google Cloud Platform (GCP).
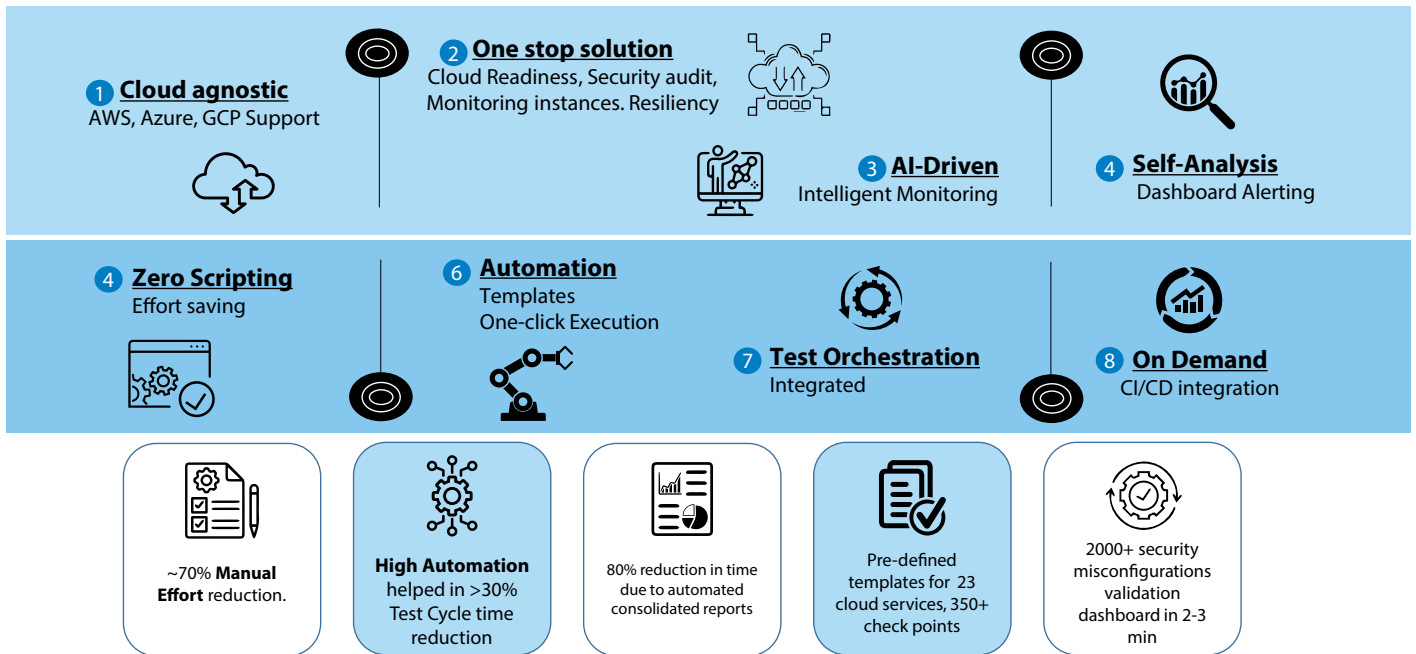
Key features include:

- Over 1000+ preconfigured checks

- Compliance validation support for standards such as:

  - Health Insurance Portability and Accountability Act (HIPAA)

  - Center for Internet Security (CIS, CIS1, CIS2)

  - Payment Card Industry Data Security Standard (PCI DSS)

- Ability to conduct over 2000 checks with analysis in just 2-3 minutes

- Handling of false positive cases

5. Static Code Analyzer – This provides validation of different IaC templates like Terraform, Cloud-formation, serverless, and ARM as per the AWS, Azure, and GCP compliance best practices.

Key features are:

- Over 900 security scan policies

- Supports scan for AWS, Azure, GCP

- Allows to suppress acceptable risk

- Provides interactive offline reports with remediation

- Integrates scans with CI/CD pipelines

Diagram — Features

1 Cloud agnostic
AWS, Azure, GCP Support

2 One stop solution
Cloud Readiness, Security audit, Monitoring instances. Resiliency

3 AI-Driven
Intelligent Monitoring

4 Self-Analysis
Dashboard Alerting

4 Zero Scripting
Effort saving

6 Automation
Templates
One-click Execution

7 Test Orchestration
Integrated

8 On Demand
CI/CD integration

~70% **Manual Effort** reduction.

High Automation helped in >30% Test Cycle time reduction

80% reduction in time due to automated consolidated reports

Pre-defined templates for 23 cloud services, 350+ check points

2000+ security misconfigurations validation dashboard in 2-3 min

Why Choose Infosys?

Infosys has significant experience and expertise in cloud infrastructure validation across verticals like banking, healthcare, retail, manufacturing, and utilities. Infosys believes in staying ahead of the curve; our solution helps accelerate value for enterprises planning or embarking on cloud digital transformation journeys.

Infosys Cloud Infrastructure Validation (ICIV) helps enterprises perform cloud infrastructure validation for platform readiness, server build, compliance with benchmarks, adherence to specific client requirements, and meeting security parameters.

Benefits

- Accelerates cloud configuration validation with the ability to create a test suite, connect to a cloud account, and validate service configuration in one click using a simple GUI

- Supports a multi-cloud environment (private, public, hybrid)

- Improves productivity through a no-code framework. Enables concurrent execution of test suites, shift-left infrastructure validation using CICD pipelines, and a visual reporting dashboard

- Reduces manual effort by 70% and test cycles by 30% with the help of in-built test orchestration, templatized automation, and parallel execution

- Reduces test reporting time by 80% with online and offline interactive reports and dashboards

Success Story

A leading American investment advisory firm embarked on a cloud transformation journey to establish scalable and flexible cloud technology that would help them rapidly innovate and adapt to changing business and regulatory needs. Infosys implemented the ICIV platform and integrated it with a DevOps pipeline for automated validation of AWS services. This helped the client achieve:

- A shift-left approach for infrastructure validation using CICD pipeline

- 80% reduction in manual effort

- 80% reduction in time taken to consolidate reporting

- Negligible retesting efforts

Reach us at IVS_Marketing@infosys.com to find out how the right cloud infrastructure validation solution drives greater value from your cloud investments.

For more information, contact askus@infosys.com

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