Full-stack Observability & Reliability Engineering for Platform & Product Engineering

- Powered by Cisco AppDynamics

Achieving Customer Delight Through Continuous Assurance & Automation!!

Delivering High Performance and Reliable Systems

HCL's Engineering and R&D Services (ERS) is amongst the most valued broad-based global engineering service providers with over four decades of experience in helping enterprise customers drive digital transformation initiatives globally. HCL method is to seamlessly integrate with and complement with customer's product engineering, research and development (ER&D) roadmap activities to provide them with the most feasible solutions. At ERS, PSRE (Performance & Site Reliability Engineering) team assures improved Time to Profit and maximize Return on Innovation (RoI) by providing complete end-to-end visibility with actionable insights on full-stack.

User experience & performance

Application performance -related to business goals

Improved time to market & time to resolve

Upfront visibility on business Impacts using analytics

ERS PSRE team in collaboration with Cisco AppDynamics has developed a co-innovative solution that monitors, measures, and assures our customer's E2E IT applications

01
Single pane of view of IT systems & applications capacities and performance – to take informed decisions

02
Transparent views on user experience, business conversion & churn

Business needs we address
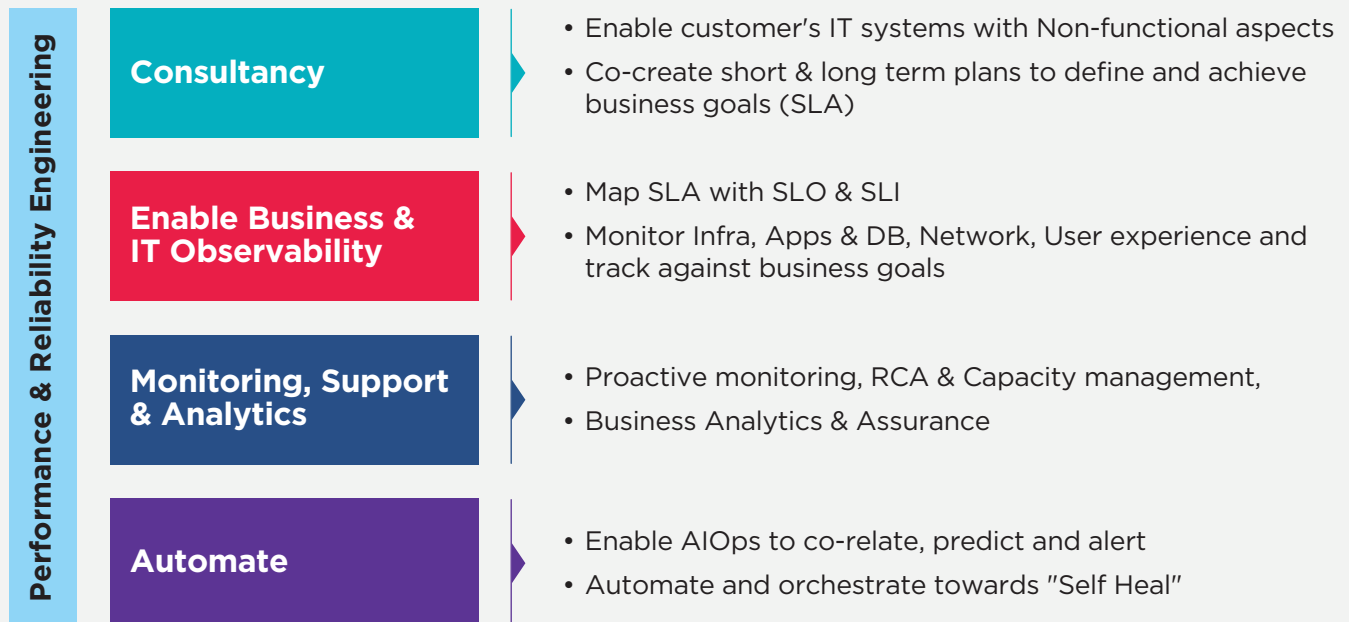
04
Co-innovate for self-resilient IT systems that aligns to business goals

03
Accelerated deliveries with improved time to detect & faster resolution

Solution Overview

Performance & Reliability is second most after security in the list of top challenges highlighted by the C-suites to drive digital transformation. Especially as the new-age digital technologies such as **I4.0, IoT, AI, AR / VR,** Cloud Platform, Autonomous vehicles, etc. Dominating the current set of engineering service demands, we at **HCL's PSRE** with over 6000+ person years of experience provide a proactive E2E approach to prevent, protect and pre-empt the **Performance, Scalability, Availability & Reliability** of the entire application & IT stack.
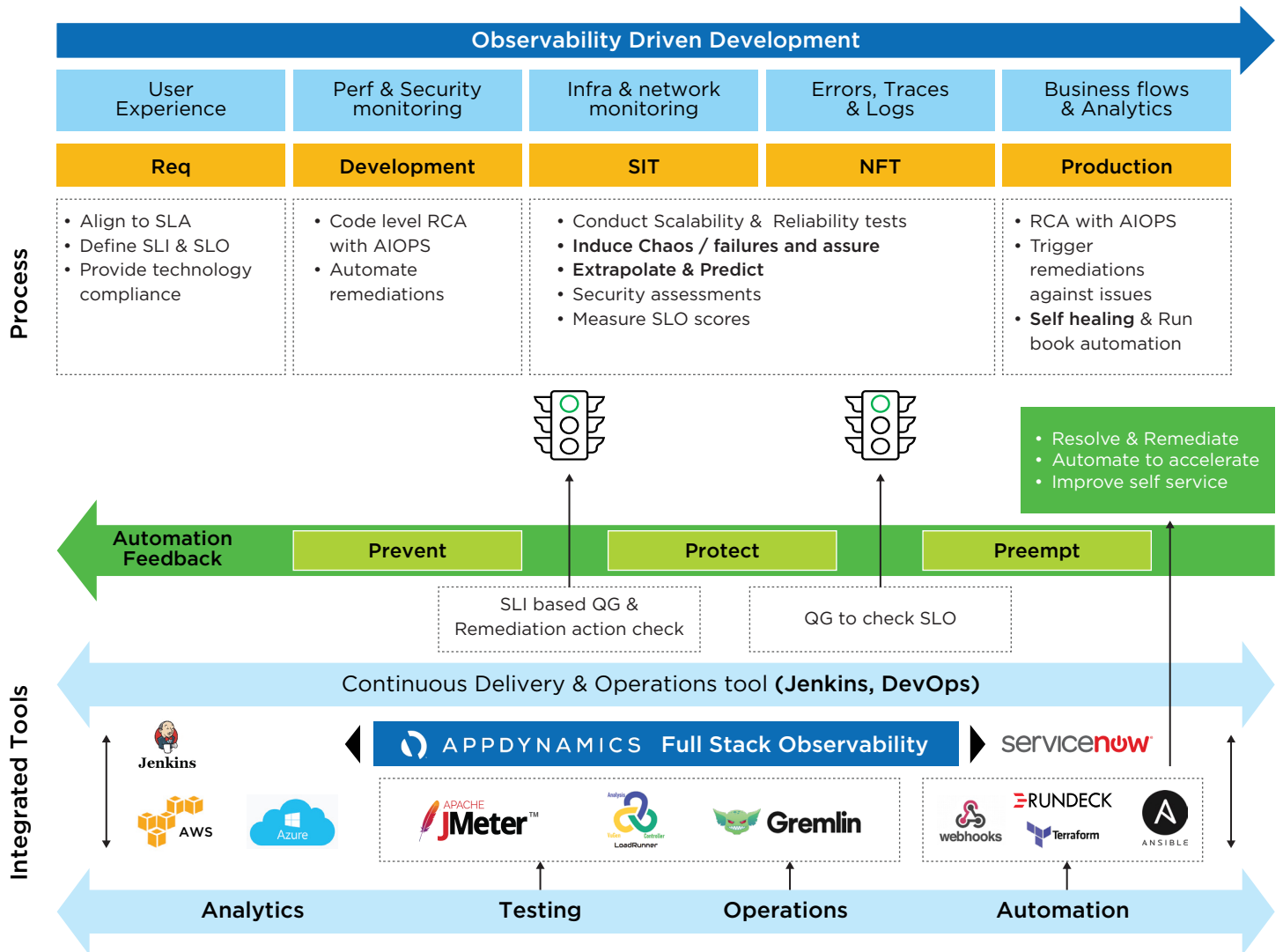
Performance & Reliability Engineering

Consultancy
- Enable customer's IT systems with Non-functional aspects
- Co-create short & long term plans to define and achieve business goals (SLA)

Enable Business & IT Observability
- Map SLA with SLO & SLI
- Monitor Infra, Apps & DB, Network, User experience and track against business goals

Monitoring, Support & Analytics
- Proactive monitoring, RCA & Capacity management,
- Business Analytics & Assurance

Automate
- Enable AIOps to co-relate, predict and alert
- Automate and orchestrate towards "Self Heal"

Full- Stack Observability from Cisco

FULL-STACK VISIBILITY

Observable and optimizable technology stack

FULL-STACK INSIGHTS

Application and business insights across stack

FULL-STACK ACTIONS

Prioritized remediations and optimizations across stack

Powered by Cisco AppDynamics and based on the principles of SRE we have a proven framework that is driven by full-stack observability that helps to:

- Align IT Teams support the technology stack with a shared common context.
- **Prioritize** based on **business KPI** and user experience
- **Embrace automation** over manual effort
- SLI's are available for applications as well as infrastructure that powers the application.
- Track how business call flows are performing against business requirements

- SLI & SLO driven quality gates across Dev-Test-Ops – **single pane of glass and truth to track program progress**
- **Enable SecOps** as part of quality gates, catching vulnerabilities before they move out of Development.
- Enable every technical team to deep dive on issues with **auto triage** and **RCA**
- Centralized and correlated **performance & reliability analytics** across SDLC to **proactively collaborate** and optimize

Continuous Ops - Shift Left Performance & Reliability Engineering

Observability Driven Development

User Experience	Perf & Security monitoring	Infra & network monitoring	Errors, Traces & Logs	Business flows & Analytics
Req	**Development**	**SIT**	**NFT**	**Production**

Process

- Align to SLA
- Define SLI & SLO
- Provide technology compliance

- Code level RCA with AIOPS
- Automate remediations

- Conduct Scalability & Reliability tests
- **Induce Chaos / failures and assure**
- **Extrapolate & Predict**
- Security assessments
- Measure SLO scores

- RCA with AIOPS
- Trigger remediations against issues
- **Self healing** & Run book automation

- Resolve & Remediate
- Automate to accelerate
- Improve self service

Automation Feedback

Prevent	Protect	Preempt

SLI based QG & Remediation action check

QG to check SLO

Continuous Delivery & Operations tool (Jenkins, DevOps)

Integrated Tools

Jenkins

AWS | Azure

APPDYNAMICS Full Stack Observability | servicenow

APACHE JMeter™ | LoadRunner | Gremlin

webhooks | RUNDECK | Terraform | ANSIBLE

Analytics	Testing	Operations	Automation

Solution Benefits & Highlights

Gain deep, end-to-end visibility across your application ecosystem

Prioritize issues based on user and business impact

Proactively pinpoint and resolve problems before they affect performance & reliability

Optimize your infrastructure cost and performance

Align your tech decisions with the needs of your business

Modernize your approach to application security

Proactively automate towards increased efficiencies

This Shift Left framework empowers the digital transformation with full stack observability and proactive assurance early in application development life cycle.

Engage with us

As you envisage a new platform – Performance consultancy and observability strategies help

To automate and implement **Site Reliability Engineering**

Application modernization / digital transformation / cloud migration / upgrades, we help in implementing Full stack observability enablement right from testing phase

If your production systems encounter errors, end user complains and capacity bottlenecks

Contact us at: **HCL_SRE@hcl.com**