PRESIDIO®

SOLUTION BRIEF

Digital

Presidio Self-Evolving Application Framework



Resolve incidents in minutes, with your engineers in control.

THE CHALLENGE

Modern application estates have outgrown human-centered operating models. Engineering teams are spending more time firefighting than building new capabilities, and the gap is widening as AI-generated code accelerates shipping velocity without a corresponding increase in operational capacity.

- **30–50% of sprint time on ops rather than feature delivery**
- **Alert volumes on modern apps are increasing faster than teams can scale; manual triage is not keeping up**
- **Observability investments not closing the loop; telemetry without autonomous remediation leaves the fix loop open**
- **Increasing MTTR and engineer attrition rates due to on-call fatigue, context loss, and 3am escalations caused by a loss of tribal knowledge**

AT-A-GLANCE

The Presidio Self-Evolving Application Framework automates triage, root cause analysis, and remediation under seven Safe Autonomy principles. Cut MTTR by up to 80% and on-call overhead by 50%, with nothing shipping without human sign-off.

Presidio's Digital Services Team will implement the framework to transform how organizations maintain and operate their applications. By combining automated triage (L1), root cause analysis (L2), and code-level remediation (L3), Presidio delivers end-to-end incident resolution in minutes, not hours, while keeping engineers in control at every phase. The result is a shift from reactive firefighting to governed autonomous operations.

Unlike AI bolt-on services to existing telemetry solutions or specialized AI SRE products, the Self-Evolving Application Framework operates across a genuinely heterogeneous, multi-vendor estate with a neutral SI delivery model and accountability standing behind every agentic action.

> **"We know agentic AI is a major part of the solutions but how can we employ it safely and effectively? How can we trust the outputs? And, how do we prevent runaway costs?"**

OUR APPROACH

The Self-Evolving Application Framework introduces a layered, governed autonomy model across three escalation tiers plus two governance agents, each building on the last, with policy-controlled escalation at every threshold:

Escalation tiers:

- **L1 - Triage Agent**
  Ingests alerts, tickets, and signals. Classifies, deduplicates, and routes incidents. Resolves known patterns, escalates unknowns to L2.
- **L2 - Root Cause Analysis Agent**
  Performs causal investigation using observability telemetry, knowledge graph, and change history. Identifies the root cause and proposes a remediation path. Escalates to L3 for code-level fixes.
- **L3 - Remediation Agent**
  Generates and executes the fix and opens a pull request in GitHub pending human review. Every PR is sandboxed and approved before merging. Nothing ships without human sign-off.

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Governance agents (run across all three tiers):

- **Cost-Controller Agent**
  Governs LLM API spend per ticket. Applies per-ticket budget caps and dynamic adjustment rules to prevent runaway AI cost. Generates cost-per-ticket telemetry for reporting.
- **Self-Reflection Agent**
  Audits the reasoning quality of each agentic action. Feeds back into the knowledge graph to improve future triage and RCA accuracy. The engine of the "self-evolving" capability.

SAFE AUTONOMY FRAMEWORK

Every agentic framework deployment is governed by Presidio's Safe Autonomy framework — seven principles applied at deployment time and enforced at runtime. This is not a bolt-on; it is the core architecture:

- Action Safelists
- Cost Governance
- HITL Escalations
- Full Auditability
- Minimal Authority
- Validated Execution
- Grounded Reasoning

THE PRESIDIO ADVANTAGE

Presidio Digital is born in the cloud and laser-focused on modernizing and building cloud-native applications that exceed business goals. We pace the industry with a 90% retention rate in the U.S. and India. Working with Presidio means you get consistent, reliable, outcome-driven builders with a true DevOps approach. With more than 500 team members and 40 global locations, there is no problem in the world too big for our Digital gurus to solve.

WHY PRESIDIO

Presidio is here to guide your business transformation journey by helping you carefully navigate the fast-changing tech landscape. As the bridge between where you've been with foundational IT, and where you're going with modern AI and cloud services, we measure success with you on the terms you define. We strive to build lifetime relationships with each of our customers, and we do so by being fearless, fast, flexible, and compassionate. It's our mission to earn your trust and deliver innovative, high-quality outcomes at speeds once thought not possible, so you can achieve your business goals faster.

Put governed autonomy to work for your team
Connect with Presidio about bringing the Presidio Self-Evolving Application Framework to your environment.

Contact Presidio today:
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