

HACI SYSTEM ARCHITECTURE

HARNESS-ENHANCED AGENTIC COLLABORATIVE INTELLIGENCE

LAYER 4

META-ORCHESTRATION

The "Brain": Routing, Resource Allocation & Complexity Scoring

MODEL: CLAUDE OPUS

Deep Reasoning Engine

COMPLEXITY SCORING

Scale 1-10 Decision Matrix

ROUTING ENGINE

Single vs. Swarm Mode

LAYER 3

HUMAN-AGENT COLLABORATION

The "Heart": Confidence-based governance & safety gates

AUTONOMOUS

≥95% Confidence

REVIEW

85-94% Confidence

APPROVAL

70-84% Confidence

HUMAN LED

<70% Confidence

LAYER 2

SWARM COORDINATION

The "Nervous System": Protocol management & context sharing

SWARM COORDINATOR

Plan → Spawn → Synthesize

1. INITIALIZATION

Parse ticket & identify domains

3. SYNTHESIS

Resolve conflicts (OpenAI o1)

2. PARALLEL EXECUTION

Agents work via Context Bus

4. HUMAN GATE

Present final plan

LAYER 1

SPECIALIZED AGENTS

The "Hands": Domain experts executing specific tasks

THINK → ACT → OBSERVE

LOGS

Gemini Flash

CODE

Sonnet 4

INFRA

Sonnet 4

SECURITY

OpenAI o1

NETWORK

Sonnet 4

DATABASE

Sonnet 4

MONITOR

Gemini Flash

CI/CD

Gemini 2.0

INTEGRATED WITH JIRA • DATADOG • GITHUB • AWS • SLACK

FOUNDATION

DATA & INFRASTRUCTURE

PostgreSQL

Records

Redis

Contact Bus

TimescaleDB

Metrics

KUBERNETES

Auto-scaling Pods