

# 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**

Context Bus

**TimescaleDB**

Metrics

**KUBERNETES**

Auto-scaling Pods