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RADIANT v4.18.0 - Complete Source Code Export

For Gemini Assessment Export Date: January 9, 2026 **Total Source Files:** 1,484

Executive Summary

RADIANT (Real-time AI Decision Intelligence And Neural Technology) is a **multi-tenant AWS SaaS platform** for enterprise AI model access, orchestration, and management. It consists of three primary components:

1. **Swift Deployer App** - macOS native application for infrastructure deployment
2. **AWS Infrastructure** - CDK-defined serverless backend with 14+ stacks
3. **Admin Dashboard** - Next.js web interface for platform administration

The platform also includes **Think Tank**, a consumer-facing AI assistant with advanced features

like procedural memory (The Grimoire), cost optimization (Economic Governor), and multi-model orchestration.

Architecture Overview

RADIANT Platform v4.18.0

CLIENT APPLICATIONS

Swift Deployer (macOS Native)	Admin Dashboard (Next.js 14)	Think Tank UI (React/Next)
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API GATEWAY LAYER

REST API /api/v2	WebSocket /ws	Auth API /auth	Admin API /admin
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LAMBDA FUNCTIONS LAYER

Brain Router	Think Tank	Billing Metering	Cato Safety	Governor API
Grimoire API	Admin Handlers	Artifact Engine	Ego Service	Domain Taxonomy

AI SERVICES LAYER

LiteLLM (Proxy/Router)	Self-Hosted Models (56)	External APIs (50)
Consciousness Engine	Flyte Workflows (Python)	Formal Reasoning

DATA PERSISTENCE LAYER

Aurora PostgreSQL
(160+ migrations)
+ pgvector

ElastiCache
(Redis)

S3 Storage
(Artifacts)

Project Structure

```
radiant/
  VERSION                # "4.18.0"
  RADIANT_VERSION        # "4.18.0"
  THINKTANK_VERSION      # "3.2.0"
  VERSION_HISTORY.json   # All releases with hashes

apps/                    # Client Applications
  swift-deployer/        # macOS Deployer (36 Swift files)
    Sources/RadiantDeployer/
      Models/            # Data models
      Services/          # AWS, API, AI services
      Views/             # SwiftUI views
      Components/        # Reusable UI components
    Package.swift

  admin-dashboard/       # Next.js Admin UI (~120 TSX files)
    app/(dashboard)/    # Dashboard pages
      brain/            # Brain Router config
      cato/             # Safety system admin
      thinktank/        # Think Tank features
      models/           # AI model management
      billing/          # Billing & usage
      components/       # React components
      lib/              # Utilities

packages/               # Core Packages
  shared/               # @radiant/shared (~80 TS files)
    src/
      types/            # TypeScript type definitions
      constants/        # Shared constants
```

infrastructure/	# @radiant/infrastructure (~500 files)
lib/stacks/	# 14+ CDK stacks
lambda/	# Lambda handlers
admin/	# Admin API handlers
api/	# Public API handlers
brain/	# Brain Router
thinktank/	# Think Tank APIs
shared/	# Shared services
services/	# Core business logic
migrations/	# 160+ SQL migrations
flyte/	# Python Workflows (6 files)
workflows/	# Flyte task definitions
utils/	# Python utilities
config/	# Configuration
ethics/presets/	# Ethics framework presets
docs/	# Documentation
RADIANT-ADMIN-GUIDE.md	# Platform admin guide
THINKTANK-ADMIN-GUIDE.md	# Think Tank admin guide
exports/	# Source exports (this directory)

Component Details

1. Swift Deployer App (36 files)

Purpose: Native macOS application for deploying and managing RADIANT infrastructure on AWS.

Directory	Files	Description
Models/	8	Data models (Configuration, Deployment, Credentials, etc.)
Services/	21	AWS, CDK, API, AI, Database, Deployment services
Views/	3	SwiftUI view controllers
Components/	4	Reusable UI components

Key Features: - One-click AWS infrastructure deployment - Real-time deployment progress tracking - Multi-region support - 1Password credential integration - AI-powered deployment assistant - Secure local storage (SQLCipher)

2. AWS Infrastructure (500+ files)

Purpose: CDK-defined serverless backend with all Lambda functions, stacks, and configurations.

CDK Stacks (14 stacks)

Stack	Purpose
admin-stack.ts	Admin API and dashboard backend
ai-stack.ts	AI model integration and routing
api-stack.ts	Public REST API
auth-stack.ts	Cognito authentication
batch-stack.ts	Batch processing jobs
brain-stack.ts	Brain Router orchestration
cato-genesis-stack.ts	Consciousness engine
cato-redis-stack.ts	Cato Safety with Redis
database-stack.ts	Aurora PostgreSQL
grimoire-stack.ts	Procedural memory system
storage-stack.ts	S3 artifact storage
thinktank-stack.ts	Think Tank features
tier-transition-stack.ts	Tenant tier upgrades
vpc-stack.ts	VPC and networking

Lambda Services (100+ handlers)

Category	Handlers	Purpose
admin/	20+	Admin dashboard APIs
api/	10+	Public model/chat APIs
brain/	5+	Brain Router orchestration
thinktank/	15+	Think Tank features
billing/	5+	Usage metering and billing
shared/services/	40+	Core business logic services

3. Admin Dashboard (120+ files)

Purpose: Next.js 14 web application for platform administration.

Section	Pages	Features
Brain	8	Router config, cognition, dreams, oversight
Cato	6	Safety personas, CBF, audit, recovery
Think Tank	15+	Grimoire, Governor, Ego, domains, artifacts
Models	5	Model management, thermal controls
Billing	3	Usage, credits, invoices
Compliance	4	HIPAA, SOC2, audit logs
Settings	5	Configuration, timeouts, i18n

4. Database Schema (160+ migrations)

Purpose: PostgreSQL schema with Row-Level Security for multi-tenancy.

Migration Range	Features
001-009	Core schema, tenants, models, billing
010-019	Brain Router, analytics, Think Tank
020-029	Collaboration, memory, orchestration
030-039	Isolation, i18n, billing credits
040-049	Artifacts, scheduled prompts, domains
050-099	Brain plans, formal reasoning, ego
100-129	Consciousness, learning, metrics
130-160	Cato safety, PHI sanitization

5. Flyte Workflows (6 files)

Purpose: Python-based workflow orchestration for Think Tank.

File	Purpose
<code>grimoire_tasks.py</code>	Procedural memory management
<code>think_tank_workflow.py</code>	HITL reasoning workflow
<code>db.py</code>	RLS-safe database connections
<code>embeddings.py</code>	Vector embedding generation
<code>cato_client.py</code>	Safety validation client
<code>__init__.py</code>	Module exports

Key Features

1. Multi-Tenant Architecture

- Row-Level Security (RLS) on all tables
- Tenant context via `app.current_tenant_id`
- Isolated data per tenant

2. 106 AI Models

- 50 external providers (OpenAI, Anthropic, Google, etc.)
- 56 self-hosted models (medical, scientific, etc.)
- LiteLLM proxy for unified access

3. Brain Router

- 9 orchestration modes (thinking, coding, creative, etc.)
- Domain-aware model selection
- Affect-based hyperparameter mapping

4. Consciousness Engine

- Ego system for persistent identity
- Affective state management
- Ethics framework selection

5. Cato Safety

- 5-layer security stack
- Control Barrier Functions (CBF)
- Merkle audit trail
- 5 mood personas

6. The Grimoire

- Self-optimizing procedural memory
- Vector embeddings for semantic search
- Automatic learning from successes

7. Economic Governor

- System 0 complexity classification
- Cost-optimized model routing
- Per-domain configuration

Export File Index

This export is split into multiple parts by component:

Part	File	Contents	Lines
00	RADIANT-COMPLETE-INDEX.md	Master index	-
01	RADIANT-SWIFT-DEPLOYER	Deployer App (all 36 files)	~5,000
02	RADIANT-CDK-STACKS	CDK Stack definitions (14 files)	~3,000
03	RADIANT-LAMBDA-ADMIN	Admin Lambda handlers	~4,000
04	RADIANT-LAMBDA-API-PUBLIC	Public API Lambda handlers	~3,000
05	RADIANT-LAMBDA-BRAIN	BrainRouter handlers	~2,000
06	RADIANT-LAMBDA-THINK	ThinkTank handlers	~3,000
07	RADIANT-LAMBDA-SERVICES	Services	~8,000
08	RADIANT-SHARED-TYPES	Type definitions	~4,000
09	RADIANT-DASHBOARD-PAGES	Dashboard pages	~6,000
10	RADIANT-DASHBOARD-COMPONENTS	Components	~4,000
11	RADIANT-MIGRATIONS	Database migrations	~8,000
12	RADIANT-FLYTE-WORKFLOWS	Flows	~2,000

Estimated Total: ~52,000 lines of source code

Technology Stack

Layer	Technologies
Frontend	Next.js 14, React, TypeScript, Tailwind CSS, shadcn/ui
Desktop	Swift 5.9, SwiftUI, macOS 13+, SQLCipher
Backend	AWS Lambda, Node.js 20, TypeScript
Database	Aurora PostgreSQL 15, pgvector, ElastiCache Redis
AI	LiteLLM, 106 models, SageMaker endpoints
Infra	AWS CDK, CloudFormation, VPC, API Gateway
Workflows	Flyte, Python 3.11
Auth	Cognito, JWT, RBAC

How It Works (Narrative)

User Journey: Think Tank Query

1. **User submits prompt** via Think Tank UI
2. **Domain Detection** identifies field/specialty
3. **Brain Router** selects orchestration mode
4. **Grimoire** consulted for relevant heuristics
5. **Governor** evaluates complexity, selects optimal model
6. **Cato Safety** validates request
7. **LiteLLM** routes to selected model
8. **Response generated** with consciousness context
9. **Librarian reviews** for learning opportunities
10. **Metrics logged** for billing and analytics

Admin Journey: Model Management

1. **Admin logs in** via Cognito
2. **Dashboard** shows system health
3. **Models page** lists all 106 models
4. **Enable/disable** models per tenant
5. **Set pricing** and usage limits
6. **Monitor usage** in real-time
7. **Review compliance** reports
8. **Manage billing** and credits

Deployment Journey: New Installation

1. **Open Swift Deployer** on macOS
2. **Configure AWS credentials** (1Password integration)
3. **Select region** and environment
4. **AI Assistant** guides through setup
5. **One-click deploy** runs CDK stacks
6. **Progress tracked** in real-time
7. **Health checks** verify deployment
8. **Admin invited** via email

Security Model

Multi-Tenant Isolation

- Every table has `tenant_id` column
- RLS policies enforce tenant boundaries
- SET `app.current_tenant_id` before all queries

Authentication

- Cognito user pools per tenant
- JWT tokens with tenant claims
- API Gateway authorizers

Safety (Cato)

- 5-layer security stack
- Control Barrier Functions (CBF)
- Fail-closed for writes
- Human escalation workflow

Compliance

- HIPAA-ready with PHI sanitization
- SOC2 audit logging
- Data retention policies
- Self-audit checklists

Companion export files follow with full source code...