

RADIANT Platform v4.18.2 Complete Documentation

Contents

RADIANT Platform v4.18.2	3
Complete Documentation	3
Table of Contents	3
1. Platform Overview	4
1.1 What is RADIANT?	4
1.2 Components	4
1.3 Technology Stack	4
2. Architecture	4
2.1 High-Level Architecture	4
2.2 CDK Stacks	5
2.3 Database Schema	5
3. Deployment Guide	6
3.1 Prerequisites	6
AWS Account Setup	6
Development Environment	6
3.2 Quick Start	6
Automated Deployment	6
Verify Deployment	6
3.3 Manual Deployment	6
Step 1: Install Dependencies	6
Step 2: Build Packages	7
Step 3: Deploy CDK Stacks	7
3.4 Swift Deployer App	7
4. Administrator Guide	7
4.1 Administrator Roles	7
4.2 Dashboard Overview	7
Main Sections	8
4.3 Tenant Management	8
Creating a Tenant	8
Tenant Settings	8
4.4 AI Model Configuration	8
Model Properties	8

Self-Hosted Models	9
4.5 Billing Administration	9
Subscription Plans	9
Credit Management	9
4.6 AGI Orchestration Settings	9
Service Weights	9
Decision Weights	9
4.7 Delight System Administration	9
Dashboard Overview	10
Managing Categories	10
Statistics Dashboard	10
API Endpoints	10
4.8 Localization	10
Supported Languages	10
Translation Management	11
5. Think Tank User Guide	11
5.1 Getting Started	11
Creating Your Account	11
Your First Chat	11
5.2 Choosing Models	11
Available Models	11
Auto Mode	11
5.3 Focus Modes & Personas	12
Focus Modes	12
Personas	12
5.4 Canvas & Artifacts	12
Canvas Features	12
Artifact Types	12
5.5 Collaboration	12
Sharing Chats	12
Team Features	12
5.6 Credits & Billing	13
Understanding Credits	13
Plans	13
5.7 Delight System	13
What is Delight?	13
Personality Modes	13
Achievements	13
Sound Themes	14
Customization	14
5.8 Keyboard Shortcuts	14
6. API Reference	14
6.1 Authentication	14
Obtaining Tokens	14
6.2 Core Endpoints	15
Chat Completions	15

Models	15
6.3 Admin Endpoints	15
Tenants	15
Users	16
Billing	16
6.4 Think Tank Endpoints	16
Brain Plans	16
Domain Taxonomy	16
Delight	16
6.5 Error Codes	16
7. Changelog	17
[4.18.2] - 2024-12-28	17
Added	17
Changed	17
Documentation	17
[4.18.1] - 2024-12-25	17
Added	17
Fixed	17
[4.18.0] - 2024-12-24	18
Added	18
Appendix	18
A. Quick Reference	18
Swift Deployer Commands	18
CDK Commands	18
Database Migrations	18
B. Support Resources	18
C. Version Information	19

RADIANT Platform v4.18.2

Complete Documentation

Multi-Tenant AWS SaaS Platform for AI Model Access & Orchestration

Version: 4.18.2 | Last Updated: December 28, 2024

Table of Contents

1. Platform Overview
2. Architecture
3. Deployment Guide
4. Administrator Guide
5. Think Tank User Guide

6. API Reference
 7. Changelog
-

1. Platform Overview

1.1 What is RADIANT?

RADIANT is a multi-tenant AWS SaaS platform providing unified access to 106+ AI models through:

- **50 External Provider Models:** OpenAI, Anthropic, Google, xAI, DeepSeek, and more
- **56 Self-Hosted Models:** Running on AWS SageMaker for cost control and privacy
- **Intelligent Routing:** Brain router for optimal model selection
- **Neural Engine:** Personalization learning from user interactions

1.2 Components

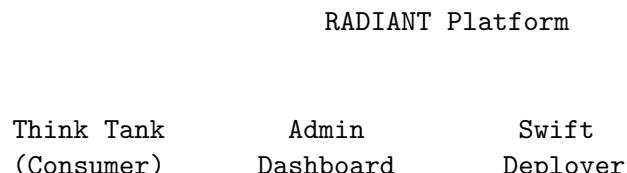
Component	Location	Purpose
Swift Deployer App	apps/swift-deployer/	macOS app that deploys infrastructure
AWS Infrastructure	packages/infrastructure/	CDK stacks, Lambdas, databases
Admin Dashboard	apps/admin-dashboard/	Next.js web admin interface
Think Tank	Consumer product	AI chat interface for end users

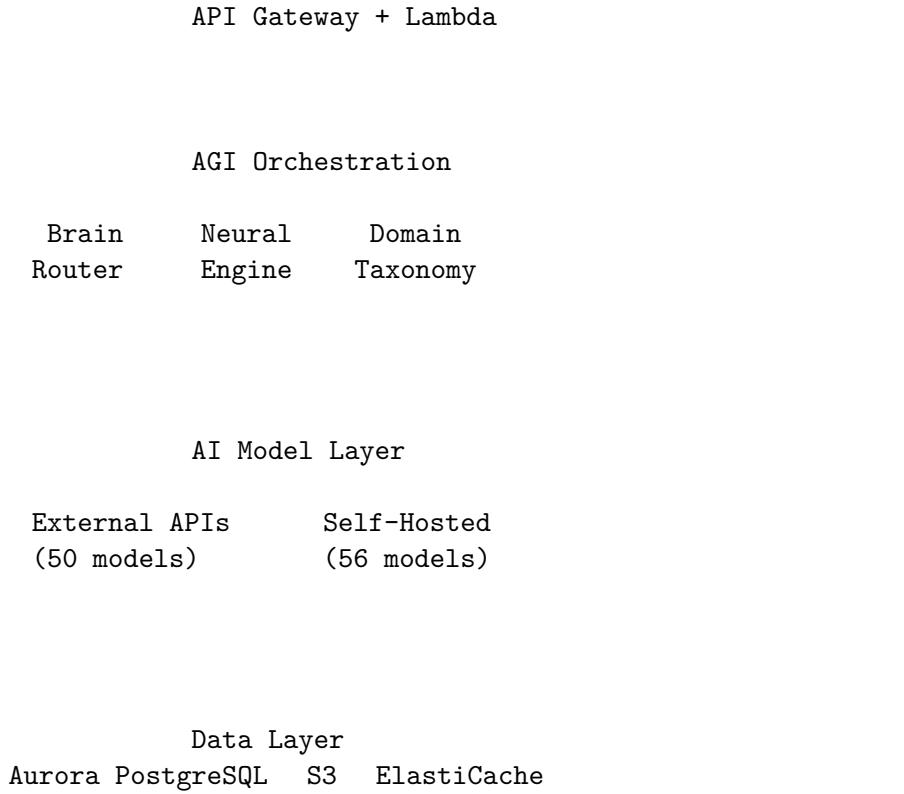
1.3 Technology Stack

- **Swift App:** SwiftUI, macOS 13.0+, Swift 5.9+, Xcode 15+, SQLCipher
 - **Infrastructure:** AWS CDK (TypeScript), Aurora PostgreSQL, Lambda, API Gateway
 - **Dashboard:** Next.js 14, TypeScript, Tailwind CSS
 - **AI Integration:** 106+ models, LiteLLM proxy
-

2. Architecture

2.1 High-Level Architecture





2.2 CDK Stacks

Stack	Purpose
NetworkStack	VPC, subnets, security groups
DatabaseStack	Aurora PostgreSQL, secrets
CacheStack	ElastiCache Redis
StorageStack	S3 buckets, CloudFront
AuthStack	Cognito, JWT validation
APIStack	API Gateway, Lambda functions
AIStack	SageMaker endpoints, LiteLLM
MonitoringStack	CloudWatch, alarms, dashboards

2.3 Database Schema

Key tables:

- `tenants` - Multi-tenant organization data
- `users` - User accounts with tenant association
- `ai_models` - Model registry with capabilities
- `ai_providers` - External API provider configs
- `usage_logs` - Request/token tracking
- `billing_*` - Subscriptions, credits, transactions
- `delight_*` - Personality system data

3. Deployment Guide

3.1 Prerequisites

AWS Account Setup

Requirement	Action	Verification
AWS Account	Create or use existing	Account ID available
IAM User	Create with AdministratorAccess	Access keys configured
AWS CLI	Install and configure	<code>aws sts get-caller-identity</code>
Route 53 Domain (optional)	Register domain	Domain in hosted zone

Development Environment

Requirement	Version	Verification
Node.js	20.x LTS	<code>node --version</code>
pnpm	8.x+	<code>pnpm --version</code>
AWS CDK CLI	2.x	<code>cdk --version</code>
Xcode	15.x+	<code>xcode-select -p</code>
Swift	5.9+	<code>swift --version</code>

3.2 Quick Start

Automated Deployment

```
# Deploy to dev environment
./scripts/deploy.sh --environment dev

# Deploy to staging
./scripts/deploy.sh --environment staging

# Deploy to production
./scripts/deploy.sh --environment prod
```

Note: RADIANT uses a unified deployment model. All features are available in every deployment. Licensing restrictions are handled at the application level, not infrastructure level.

Verify Deployment

```
./scripts/verify-deployment.sh --environment dev
```

3.3 Manual Deployment

Step 1: Install Dependencies

```
cd radiant
pnpm install
```

Step 2: Build Packages

```
# Shared types
cd packages/shared && npm run build

# Lambda functions
cd packages/infrastructure/lambda && npm install && npm run build

# Admin dashboard
cd apps/admin-dashboard && npm install && npm run build
```

Step 3: Deploy CDK Stacks

```
cd packages/infrastructure

# Bootstrap (first time only)
cdk bootstrap aws://ACCOUNT_ID/REGION

# Deploy all stacks
cdk deploy --all --require-approval never
```

3.4 Swift Deployer App

The Swift Deployer provides a GUI for deployment:

1. Launch the app: `swift run` from `apps/swift-deployer/`
2. Configure AWS credentials
3. Select environment (dev/staging/prod)
4. Click Deploy

Features: - AI Assistant for deployment guidance - Real-time deployment logs - Rollback support
- Configuration management

4. Administrator Guide

4.1 Administrator Roles

Role	Permissions	Use Case
Super Admin	Full access to all features	Platform owner
Admin	Tenant management, billing, models	Operations team
Operator	Read access, limited actions	Support team
Auditor	Read-only access to logs	Compliance team

4.2 Dashboard Overview

Access at: <https://admin.your-domain.com>

Main Sections

Section	Purpose
Dashboard	System health, key metrics
Tenants	Manage organizations
Users	User accounts, permissions
Models	AI model configuration
Providers	External API providers
Billing	Subscriptions, credits
Orchestration	AGI settings, weights
Think Tank	Delight, domains, plans
Audit	Activity logs, compliance

4.3 Tenant Management

Creating a Tenant

1. Navigate to **Tenants** → **Create New**
2. Enter organization details
3. Configure limits and quotas
4. Assign initial administrator
5. Set billing plan

Tenant Settings

Setting	Description
Name	Organization display name
Slug	URL-friendly identifier
Status	active, suspended, trial
Plan	Subscription tier
Limits	API calls, storage, users

4.4 AI Model Configuration

Model Properties

Property	Description
Provider	OpenAI, Anthropic, etc.
Model ID	Provider's model identifier
Display Name	User-facing name
Capabilities	text, vision, code, etc.
Pricing	Input/output token costs
Status	enabled, disabled, beta

Self-Hosted Models

Configure SageMaker endpoints: 1. Navigate to **Models** → **Self-Hosted** 2. Add endpoint ARN
3. Configure scaling 4. Set health checks

4.5 Billing Administration

Subscription Plans

Plan	Credits/Month	Features
Free	100	Basic models
Starter	1,000	All external models
Pro	10,000	+ Self-hosted models
Team	50,000	+ Collaboration
Business	200,000	+ Priority support

Credit Management

- View credit balances
- Add bonus credits
- Set usage alerts
- Export billing reports

4.6 AGI Orchestration Settings

Service Weights

Adjust influence of AGI components:

Service	Default Weight	Purpose
consciousness	0.8	Self-awareness modeling
metacognition	0.7	Learning from interactions
moral_compass	0.9	Ethical guardrails
domain_taxonomy	0.8	Domain expertise matching
brain_router	0.9	Model selection

Decision Weights

Weight	Purpose
modelQualityWeight	Prefer higher quality
modelCostWeight	Prefer lower cost
modelLatencyWeight	Prefer faster response

4.7 Delight System Administration

The Delight System provides personality and engagement features.

Dashboard Overview

Metric	Description
Messages Shown	Total delight messages displayed
Achievements Unlocked	Total achievements earned
Easter Eggs Found	Hidden features discovered
Active Users	Users with Delight enabled

Managing Categories

Category	Purpose
Domain Loading	Messages while loading expertise
Time Awareness	Time-of-day messages
Model Dynamics	AI consensus feedback
Achievements	Milestone celebrations
Wellbeing	Break reminders
Easter Eggs	Hidden features
Sounds	Audio feedback

Statistics Dashboard

Access at **Think Tank → Delight → View Statistics:**

- Weekly trends (12-week history)
- Top messages by engagement
- Achievement unlock rates
- Easter egg discovery metrics
- User engagement leaderboard

API Endpoints

Endpoint	Method	Description
/api/admin/delight/dashboard	GET	Dashboard data
/api/admin/delight/statistics	GET	Detailed statistics
/api/admin/delight/categories/:id	PATCH	Toggle category
/api/admin/delight/messages	POST	Create message

4.8 Localization

Supported Languages

Configure in **Settings → Localization:**

Language	Code	Status
English	en	Default

Language	Code	Status
Spanish	es	Available
French	fr	Available
German	de	Available
Japanese	ja	Available

Translation Management

1. Navigate to **Localization → Translations**
 2. Select namespace (common, chat, settings)
 3. Edit translations per language
 4. Publish changes
-

5. Think Tank User Guide

5.1 Getting Started

Creating Your Account

1. Visit thinktank.ai
2. Click **Get Started Free**
3. Sign up with email or social login
4. Verify your email
5. Complete your profile

Your First Chat

1. Click **New Chat** or press **Ctrl+N**
2. Type your question
3. Press **Enter** or click **Send**
4. Watch AI respond in real-time

5.2 Choosing Models

Available Models

Provider	Top Models
OpenAI	GPT-4o, GPT-4 Turbo, o1
Anthropic	Claude 3.5 Sonnet, Claude 3 Opus
Google	Gemini 1.5 Pro, Gemini Ultra
xAI	Grok-2
Meta	Llama 3.1 405B

Auto Mode

Enable **Auto Mode** to let the Brain Router select the optimal model based on:

- Query complexity
- Domain expertise needed
- Cost optimization
- Response speed requirements

5.3 Focus Modes & Personas

Focus Modes

Mode	Best For
General	Everyday questions
Coding	Programming help
Creative	Writing, brainstorming
Research	Deep analysis
Analysis	Data interpretation

Personas

Create custom AI personalities: 1. Go to **Personas** → **Create** 2. Set name and description 3. Define behavior instructions 4. Save and activate

5.4 Canvas & Artifacts

Canvas Features

- Rich text editing
- Code blocks with syntax highlighting
- Image generation and editing
- Diagram creation
- Export to PDF, Markdown, Word

Artifact Types

Type	Description
Document	Long-form text
Code	Executable snippets
Image	AI-generated visuals
Diagram	Flowcharts, diagrams
Table	Structured data

5.5 Collaboration

Sharing Chats

1. Click **Share** on any chat
2. Choose visibility (link, team, public)
3. Set permissions (view, comment, edit)
4. Copy share link

Team Features

- Shared workspaces
- Real-time collaboration

- Comment threads
- Version history

5.6 Credits & Billing

Understanding Credits

Action	Credits
GPT-4o message	1-5
Claude 3 Opus message	2-8
Image generation	5-20
Voice transcription	1-3

Plans

Plan	Price	Credits/Month
Free	\$0	100
Starter	\$29	1,000
Pro	\$99	10,000
Team	\$49/user	5,000/user

5.7 Delight System

Think Tank includes a personality system for engaging interactions.

What is Delight?

Contextual, friendly messages during conversations: - **Domain Loading**: “Consulting the fundamental forces...” for physics - **Time Awareness**: “Burning the midnight tokens” late at night - **Model Dynamics**: “Consensus forming...” when models agree - **Wellbeing**: “Time for a break?” after long sessions

Personality Modes

Mode	Description
Professional	Minimal feedback
Subtle	Light personality
Expressive	Full personality
Playful	Maximum fun

Achievements

Achievement	Unlock
Domain Explorer	10+ domains

Achievement	Unlock
Week Warrior	7-day streak
Renaissance Mind	50+ domains
Monthly Mind	30-day streak

Sound Themes

Theme	Style
Default	Pleasant chimes
Mission Control	NASA beeps
Library	Book sounds
Workshop	Tool clicks

Customization

Toggle in **Settings → Delight**: - Domain messages - Model personality - Time awareness - Achievements - Wellbeing nudges - Easter eggs - Sound effects

5.8 Keyboard Shortcuts

Shortcut	Action
Ctrl+N	New chat
Ctrl+/	Focus input
Ctrl+Enter	Send message
Ctrl+K	Command palette
Ctrl+B	Toggle sidebar
Esc	Stop generation

6. API Reference

6.1 Authentication

All API requests require authentication via JWT token:

`Authorization: Bearer <token>`

Obtaining Tokens

```
POST /api/auth/login
Content-Type: application/json
```

```
{
  "email": "user@example.com",
  "password": "password"
}
```

Response:

```
{  
    "access_token": "eyJ...","  
    "refresh_token": "eyJ...","  
    "expires_in": 3600  
}
```

6.2 Core Endpoints

Chat Completions

POST /api/v2/chat/completions
Content-Type: application/json

```
{  
    "model": "gpt-4o",  
    "messages": [  
        {"role": "user", "content": "Hello!"}  
    ],  
    "stream": true  
}
```

Models

GET /api/v2/models

Response:

```
{  
    "models": [  
        {  
            "id": "gpt-4o",  
            "provider": "openai",  
            "capabilities": ["text", "vision"],  
            "pricing": {  
                "input": 0.005,  
                "output": 0.015  
            }  
        }  
    ]  
}
```

6.3 Admin Endpoints

Tenants

GET /api/admin/tenants
POST /api/admin/tenants
GET /api/admin/tenants/:id

```
PUT /api/admin/tenants/:id  
DELETE /api/admin/tenants/:id
```

Users

```
GET /api/admin/users  
POST /api/admin/users  
GET /api/admin/users/:id  
PUT /api/admin/users/:id
```

Billing

```
GET /api/admin/billing/subscriptions  
GET /api/admin/billing/transactions  
POST /api/admin/billing/credits/add
```

6.4 Think Tank Endpoints

Brain Plans

```
POST /api/thinktank/brain-plan/generate  
GET /api/thinktank/brain-plan/:planId  
POST /api/thinktank/brain-plan/:planId/execute
```

Domain Taxonomy

```
GET /api/v2/domain-taxonomy  
GET /api/v2/domain-taxonomy/fields  
POST /api/v2/domain-taxonomy/detect
```

Delight

```
GET /api/admin/delight/dashboard  
GET /api/admin/delight/statistics  
PATCH /api/admin/delight/categories/:id  
POST /api/admin/delight/messages
```

6.5 Error Codes

Code	HTTP	Description
RADIANT_AUTH_001	401	Invalid token
RADIANT_AUTH_002	401	Token expired
RADIANT_AUTH_003	403	Insufficient permissions
RADIANT_TENANT_001	404	Tenant not found
RADIANT_MODEL_001	404	Model not found
RADIANT_BILLING_001	402	Insufficient credits
RADIANT_RATE_001	429	Rate limit exceeded

7. Changelog

[4.18.2] - 2024-12-28

Added

Think Tank Delight System

- Core service with personality modes and trigger types
- AGI Brain integration for real-time messages
- Real-time event streaming
- Persistent statistics with 12-week trends
- Admin dashboard with analytics

Localization System

- Database migration for UI string registry
- Translation hook for React
- Language selector in settings

Windsurf Workflows

- Policy workflows for code quality

Changed

Unified Deployment Model

- Removed tier 1-5 deployment selection
- Single deployment with all features
- Licensing at application level

Documentation

- Updated deployment guide
- Added Delight System documentation
- Added admin guide section 20

[4.18.1] - 2024-12-25

Added

- Standardized error handling system
- Comprehensive test coverage
- Testing and error code documentation

Fixed

- TypeScript errors in various services
- Type safety improvements

[4.18.0] - 2024-12-24

Added

- Unified package system
 - AI Assistant in Swift Deployer
 - Configurable timeouts
 - Cost management
 - Compliance reports
 - A/B testing framework
-

Appendix

A. Quick Reference

Swift Deployer Commands

```
# Build and run
swift run --package-path apps/swift-deployer
```

```
# Run tests
swift test --package-path apps/swift-deployer
```

CDK Commands

```
# Synthesize
cdk synth
```

```
# Deploy specific stack
cdk deploy RadiantAPIStack
```

```
# Destroy
cdk destroy --all
```

Database Migrations

```
# Run migrations
cd packages/infrastructure
npm run migrate
```

```
# Rollback
npm run migrate:rollback
```

B. Support Resources

Resource	URL
Documentation	docs.radiant.example.com
Status Page	status.radiant.example.com

Resource	URL
Support Email	support@radiantr.example.com

C. Version Information

- **RADIANT Version:** 4.18.2
 - **Think Tank Version:** 3.2.0
 - **Last Updated:** December 28, 2024
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