Sapien Protocol Governance & Access Control

This document provides an overview of the governance structure, role assignments, and access control across the Sapien protocol smart contracts.

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Multisig Architecture

Entity	Type	Threshold	Primary Responsibilities
Foundation Safe #1	Safe Multisig	3 of 5	Core foundation treasury & protocol admin
Foundation Safe #2	Safe Multisig	2 of 3	Satellite foundation operations
Foundation Safe #3	Safe Multisig	2 of 3	Satellite foundation operations
Corp Treasury	Safe Multisig	4 of 7	Investor allocations & team compensation
Blended MS	Safe Multisig	3 of 3	2 Foundation + 1 Corp signer
Security Council	Safe Multisig	2 of 3	Corp Engineering Team

Smart Contract Roles

Global Roles (Cross-Contract)

Role	Purpose	Used In
DEFAULT_ADMIN_ROLE	Ultimate admin control, can grant/revoke roles	All contracts
PAUSER_ROLE	Emergency pause/unpause functionality	SapienRewards, SapienVault

Contract-Specific Roles

Role	Purpose	Contract
REWARD_ADMIN_ROLE	Manage reward deposits/withdrawals	SapienRewards
REWARD_MANAGER_ROLE	Sign reward claims for users	SapienRewards
SAPIEN_QA_ROLE	Process QA penalties on user stakes	SapienVault
QA_MANAGER_ROLE	Execute QA decisions with signatures	SapienQA

QA_SIGNER_ROLE	Create signatures for QA decisions	SapienQA

Actor-to-Role Mapping

Primary Actor Assignments

Actor	Contract	Role(s)	Description
Foundation Safe #1	All	DEFAULT_ADMIN_ROLE	Protocol governance & upgrades
Security Council	All	PAUSER_ROLE	Emergency response capability
Rewards Admin	SapienRewards	REWARD_ADMIN_ROLE	Treasury management for rewards
Rewards Manager	SapienRewards	REWARD_MANAGER_ROLE	Off-chain reward calculation signer
QA Manager	SapienQA	QA_MANAGER_ROLE	Execute quality assessments
QA Signer	SapienQA	QA_SIGNER_ROLE	Authorize QA decisions
SapienQA Contract	SapienVault	SAPIEN_QA_ROLE	Apply penalties to user stakes

Timelock Roles

Actor	Entity	Purpose
Timelock Proposer	Security Council	Propose contract upgrades to ProxyAdmins
Timelock Executor	Foundation Safe #1	Execute approved changes after delay
Timelock Admin	Blended MS	Manage timelock configuration

Role Privileges by Contract

SapienToken

Role	Privileges
NONE	The Token contract is immutable

SapienVault

Role	Privileges
DEFAULT_ADMIN_ROLE	• Set treasury address • Set maximum stake amount • Emergency withdraw (when paused) • Grant/revoke roles
PAUSER_ROLE	• Pause all staking/unstaking operations • Unpause contract

SAPIEN_QA_ROLE	• Process QA penalties on user stakes • Reduce user stake amounts

SapienRewards

Role	Privileges
DEFAULT_ADMIN_ROLE	• Set reward token • Grant/revoke roles
PAUSER_ROLE	• Pause reward claims • Unpause contract
REWARD_ADMIN_ROLE	• Deposit reward tokens • Withdraw reward tokens • Recover unaccounted tokens • Reconcile balance
REWARD_MANAGER_ROLE	• Sign reward claims (off-chain) • Cannot claim rewards themselves

SapienQA

Role	Privileges
DEFAULT_ADMIN_ROLE	• Set treasury address • Set vault contract • Grant/revoke roles
QA_MANAGER_ROLE	• Process quality assessments with valid signatures • Apply warnings and penalties
QA_SIGNER_ROLE	• Create EIP-712 signatures for QA decisions (off-chain)

Token Allocations

Category	Allocation %	Controlled By	Vesting/Notes
Foundation Treasury	13%	Foundation Safe #1	Strategic reserves
Airdrops	13%	Foundation Safe #1	Community distribution
Trainer Compensation	15%	Foundation Safe #1	AI trainer rewards
Market Making	12% (5% + 7%)	Foundation Safe #1	CEXs, Market Makers, DEX/AMM
Investors	30.45%	Corp Treasury	Subject to vesting schedules
Team & Advisors	16.55%	Corp Treasury	Subject to vesting schedules

Deployment Addresses

MAINNET multisigs (Base - Chain ID: 8453)

Contract	Address
Foundation Safe #1	TBD
Foundation Safe #2	TBD
Foundation Safe #3	TBD
Corp Treasury	TBD
Blended MS	TBD
Security Council	TBD

MAINNET protocol (Base - Chain ID: 8453)

Contract	Address
SapienToken	TBD
SapienVault	TBD
SapienRewards	TBD
SapienQA	TBD
Timelock	TBD

TESTNET multisigs (Base Sepolia - Chain ID: 84532)

Contract	Address
Core Team Admin	0x5602be03ecFfBB85D12b7404d4B38AF58277E4cC

TESTNET protocol (Base Sepolia - Chain ID: 84532)

Contract	Address
SapienToken	0x7F54613f339d15424E9AdE87967BAE40b23Fa7F6
SapienVault	0xBCC5e0913B3df10b08C88dea87F396Dc95cAd385
SapienRewards	0xFF443d92F80A12Fb7343bb16d44df60204c6eB08
SapienQA	0x575C1F6FBa0cA77AbAd28d8ca8b6f93727b36bbF
Timelock	0x2a5F9e1Be3A78C73EA1aB256D3Eb0C5A475742cC

🔄 Governance Processes

Protocol Upgrades

1. **Proposal**: Managed by Corp, with influence from stakeholders and community

2. **Review**: Technical and security review by core team
3. **Timelock**: Changes queued with appropriate delay
4. **Execution**: After timelock delay, changes executed by authorized executors

Emergency Response

1. **Detection**: Issue identified by monitoring or community
2. **Pause**: Security Council can immediately pause affected contracts
3. **Assessment**: Technical team evaluates severity and solutions
4. **Resolution**: Fix implemented through normal or emergency procedures
5. **Unpause**: Contracts resumed after verification

Role Management

- **Adding Roles**: Only `DEFAULT_ADMIN_ROLE` can grant new roles
- **Removing Roles**: Only `DEFAULT_ADMIN_ROLE` can revoke roles
- **Role Renunciation**: Role holders can renounce their own roles
- **Admin Transfer**: Requires multi-step process with timelock

Separation of Concerns

- **Signing vs Execution**: QA and Rewards separate signature creation from execution
- **Admin vs Operations**: Day-to-day operations separated from admin functions
- **Pause vs Admin**: Emergency pause separated from administrative control

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📞 Contact & Resources

- **Governance Forum**: TBD
- **Documentation**: https://docs.sapien.io
- **Contracts Audit**: TBD
- **Bug Bounty**: TBD

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