

## **AI FORGE TECHNICAL OVERVIEW**

### **SYSTEM ARCHITECTURE**

AI Forge utilizes a modular blockchain architecture built using the Cosmos ecosystem.

Key components include:

- Smart Contracts
- Frontend Applications
- Blockchain Network Infrastructure

### **SMART CONTRACT SYSTEM**

The system utilizes two primary smart contracts.

#### **AIF TOKEN CONTRACT**

The token contract implements the CW20 standard.

Responsibilities include:

- Token issuance
- Balance management
- Token transfers
- Allowance management

#### **TOKEN SALE CONTRACT**

The sale contract manages the participation event.

Core functions include:

- Accepting USDC deposits
- Calculating token allocations
- Transferring AIF tokens to participants
- Forwarding USDC to the treasury vault

### **APPLICATION LAYER**

Frontend applications interact with the blockchain using CosmJS libraries.

Key tools include:

- CosmWasmClient
- SigningCosmWasmClient

Users interact with the protocol through web interfaces while transactions execute on-chain.

## **INFRASTRUCTURE MODEL**

The protocol utilizes a serverless architecture.

The blockchain itself performs all backend execution.

Frontend applications communicate directly with the blockchain through RPC nodes.

## **SECURITY ARCHITECTURE**

Security is achieved through:

- Deterministic smart contract execution
- Blockchain consensus validation
- Transparent treasury management
- On-chain transaction verification

## **FUTURE TECHNICAL DEVELOPMENT**

Future technical milestones include:

- AI Forge sovereign blockchain
- Validator network expansion
- Compute infrastructure integration
- Decentralized AI service marketplaces