ARCENT

Agentic Commerce on Arc Network

Give AI agents a wallet, with rules.

x402
PROTOCOL

Arc
NETWORK

USDC
SETTLEMENT

Gasless
FOR AGENTS

Executive Summary

Arcent is the first x402 payment implementation on Arc Network with **Pay-on-Success Protection**.

AI agents autonomously pay for API services using USDC micropayments — no human intervention, no credit cards, no subscriptions.

Key Innovation: Result-Validated Payment (Atomic Settlement)

Gasless for Agents: Executor wallet pays all network fees — agents only sign, never pay gas.

STEP 1	STEP 2	STEP 3	RESULT
API Called First	**Response Validated**	**Pay Only on Success**	**Failed = Zero Cost**

The Problem

AI Agents Cannot Participate in the Economy

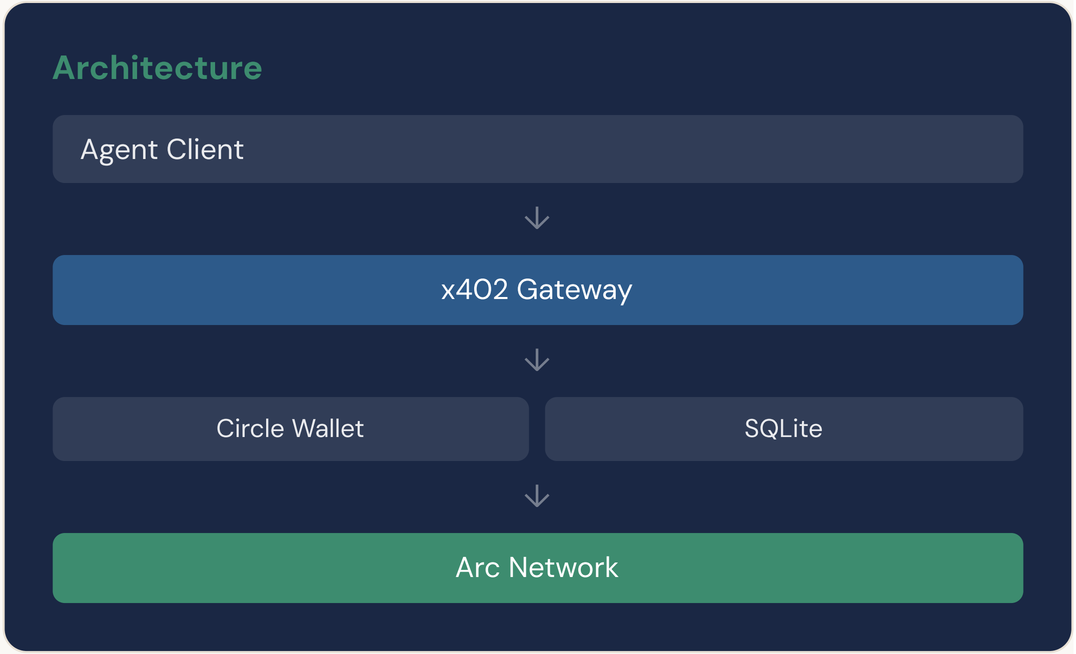
Limitation	Impact
No bank accounts	Cannot store or transfer value
No KYC verification	Excluded from financial services
No credit cards	Cannot pay for SaaS/APIs
No subscription management	Cannot handle recurring payments

> The internet economy was built for humans, not machines. Every API that requires payment is inaccessible to autonomous agents.

The Solution

Give Agents a Native Economy

Capability	Implementation
Programmable wallets	Circle Developer Controlled Wallets
HTTP payment protocol	x402 (HTTP 402 Payment Required)
Micropayments	USDC on Arc Network ($0.001 gas)
Pay-on-Success	Atomic Settlement with validation
Multi-provider routing	Reliability-based selection



Key Innovation: Atomic Settlement

Standard x402 Flow

```
1. Agent sends payment
2. API processes request
3. If API fails → Money LOST
```

Agents pay upfront and hope the API works.

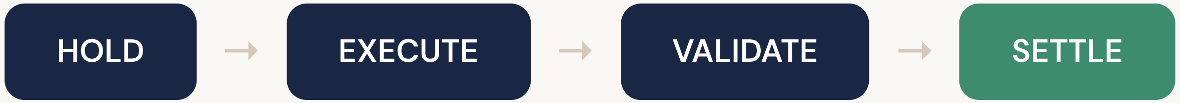
Arcent Pay-on-Success Flow

```
1. Payment HELD (not executed)
2. API processes request
3. Response VALIDATED
4. If valid → Payment executes
5. If invalid → Payment cancelled
```

Agents only pay for successful results.

Agent State Machine

Deterministic Payment Flow



HOLD → EXECUTE → VALIDATE → SETTLE

Success Path

HOLD → EXECUTE → VALIDATE → **SETTLE**

Payment released to provider

Failure Path

HOLD → EXECUTE → VALIDATE → **VOID**

Payment cancelled, agent protected

Why Arc Network?

Micropayments Require Low Gas Fees

Network	Avg Gas Cost	$0.01 API Call Viability
Ethereum Mainnet	$0.50 - $5.00	Unviable
Base	$0.01 - $0.05	Marginal
Arc Network	**$0.0001**	**Viable**

USDC as Native Gas

No need to hold ETH for gas. Agents only need USDC.

Sub-second Finality

Instant transaction confirmation. No waiting for block confirmations.

Circle Integration

Enterprise-Grade Wallet Infrastructure

Product	Purpose
Developer Controlled Wallets	Agent custody
Programmable Wallets SDK	Transaction signing
USDC	Payment currency
Arc Network	Settlement layer

```
// services/circleWallet.js


const
initializeCircle = () => {

return new
CircleWebSdk({
    apiKey: process.env.CIRCLE_API_KEY,
    entitySecret: process.env.CIRCLE_ENTITY_SECRET
  });
};

// Agent wallet on Arc

const
wallet =
await
sdk.createWallet({
  blockchain:
'ARC-TESTNET'

});
```

Multi-Provider Network

One Protocol, Multiple Service Providers

Provider	Service	Price/Call
Oracle-Price-Feed	Crypto prices (CoinGecko)	$0.002
Meteorology-Relay	Weather data (wttr.in)	$0.001
LLM-Reasoning-01	AI inference (Gemini)	$0.005
Translate-Engine	Translation services	$0.003
Sentiment-Analyzer	Text analysis	$0.003

```
// Intelligent Task Routing
function routeTask(task) {
  if (task.includes('weather')) return 'WEATHER';
  if (task.includes('bitcoin')) return 'CRYPTO';
  return 'INTELLIGENCE';
}
```

Provider Scoring System

Intelligent Reliability-Based Routing

$$\text{Score} = (\text{SuccessRate} \times 0.7) + (\text{LatencyScore} \times 0.3)$$

How It Works

- Each provider starts with score 1.0
- Failed calls reduce reliability score
- High latency reduces score
- Agent routes to highest-scored provider
- Scores persist in SQLite across restarts

Provider scores reduce capital waste over time

Unreliable providers are automatically deprioritized. Agents learn which providers deliver consistent results.

All scoring data persists to SQLite, surviving restarts and enabling historical analysis.

Performance Benchmarks

Real Transaction Data

180-350ms
API LATENCY

~1s
ARC SETTLEMENT

~1.5s
END-TO-END

$0.0001
GAS COST

Failure Scenario	Agent Cost	Why?
API Timeout	$0.00	Payment voided automatically
Invalid Response	$0.00	Validation catches bad data
Rate Limited	$0.00	No valid response = no payment

Roadmap

Phase 1: Foundation

Completed

- x402 Gateway implementation
- Circle Wallet integration
- Arc Network deployment
- Atomic Settlement logic
- Provider Scoring system

Phase 2: Growth

Next

- PostgreSQL migration
- Provider onboarding portal
- Agent SDK release
- Multi-chain support

Phase 3: Scale

Future

- Mainnet deployment
- Provider staking mechanism
- Advanced routing
- Enterprise partnerships

Why Arcent Wins

Criteria	Our Strength
Innovation	Pay-on-Success is a new x402 primitive
Technical Depth	Full stack: wallet → gateway → settlement
Arc Utilization	Micropayments only viable on Arc
Circle Integration	Developer Controlled Wallets + USDC
Demo Quality	Polished UI with live transactions
Completeness	Persistence, scoring, routing, audit

Thank You

Arcent — Give AI agents a wallet, with rules.

No credit cards. No subscriptions.
Just agents, code, and money.

GITHUB
github.com/cutepawss/arcent

LIVE DEMO
arcent.vercel.app