

BCRank Coin (BCRC) Whitepaper

The Play-to-Earn Token of BC Ranking Game

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Website: <https://bc-rankinggame.com>

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1. Executive Summary

BCRank Coin (BCRC) is the official ERC-20 utility and reward token of **BC Ranking Game**, a competitive strategy ranking game hosted at bc-rankinggame.com.

Players climb the global leaderboard by winning battles, earning **Credits** through performance-based distribution. Credits power the in-game economy and can be exchanged **1:1** for BCRC tokens by active players.

BCRC is deployed on **Polygon Mainnet** (Chain ID: 137) with a fixed initial supply of **1 billion tokens**, a transparent allocation model, and a controlled monthly emission of **31,000 BCRC** to the on-chain Treasury. Token distribution

to players is fully automated through smart contracts — even the project owner cannot freely withdraw Treasury funds.

Key properties:

Property	Value
Token Name	BCRank Coin
Symbol	BCRC
Network	Polygon (MATIC)
Standard	ERC-20 (18 decimals)
Initial Supply	1,000,000,000 BCRC
Monthly Emission	31,000 BCRC every 30 days
Credits Exchange	1 BCRC = 1 Credit (active players only)

2. Introduction

Traditional gaming economies keep all value inside closed platforms. BC Ranking Game takes a different approach: skill, strategy, and consistent activity are rewarded with **Credits** that have a direct on-chain counterpart in **BCRC**.

BCRC connects three layers:

1. **Gameplay** — ranking, battles, HQ upgrades, and resource management
2. **In-game economy** — Credits and Gold with deflationary mechanics
3. **Blockchain layer** — verifiable token ownership, Treasury contracts, and public supply data on PolygonScan

This whitepaper explains how the game works, how Credits are earned, how BCRC is created and distributed, and how the smart contracts enforce fairness and transparency.

3. BC Ranking Game Overview

BC Ranking Game is a competitive multiplayer strategy game where players fight for position on a global ranking leaderboard.

3.1 Objective

Climb the ranking by earning **Ranking Points** through successful attacks and strategic play. Higher ranks receive a larger share of the daily **Credits** pool.

3.2 Ranking System

Your position is determined by **Ranking Points**. When two players have the same number of points, the player who registered earlier receives the higher rank.

3.3 Active Players

Only **active players** can earn Credits and exchange them for BCRC tokens.

Status	Condition	Credits	BCRC Exchange
Active	≤ 200 Battle Turns	✓ Yes	✓ Yes
Inactive	≥ 201 Battle Turns	✗ No	✗ No

Battle Turns regenerate automatically (+1 every 30 minutes, maximum 200). Players can also purchase extra turns in the Headquarters (HQ) using Gold from their vault.

3.4 Core Game Actions

Every action costs **one Battle Turn**:

- **Spy** — Reveal attack odds, stealable gold, and ranking point potential
- **Attack** — Battle other players to steal gold and gain ranking points

Win probability formula:

$$\text{Win Chance (\%)} = (\text{Your Attack} / (\text{Your Attack} + \text{Target Defense})) \times 100$$

Ranking points on attack:

Scenario	Formula	Example
Attack upward (lower rank vs higher rank)	10 + rank difference	Rank 10 vs Rank 5 → 15 points
Attack downward (higher rank vs lower rank)	11 – rank difference (min. 1)	Rank 5 vs Rank 10 → 6 points
Same rank	10 points	—

After a successful attack, a temporary cooldown prevents repeated farming of the same target.

3.5 Gold Economy

Gold fuels military strength. There are three gold types:

Type	Description
Vault Gold (GoldInSave)	Safe gold; cannot be stolen; used for HQ upgrades
Owned Gold (Gold)	Gold you hold directly
Stealable Gold (GoldToSteal)	Minimum 25% of Owned Gold; vulnerable to attacks

Credits can be converted to Gold at a **1:1 ratio** with the following split:

Destination	Share
Vault Gold	50%
Owned Gold	37.5%
Stealable Gold	12.5%

3.6 Headquarters (HQ) & Deflation

In the HQ, players invest **Vault Gold** to upgrade:

- Attack Points
- Defense Points
- Spy Points
- Anti-Spy Points
- Extra Battle Turns (1 Gold per turn)

Gold spent on HQ upgrades is permanently removed from the game (burned). This creates scarcity and strengthens the in-game economy over time.

4. Credits Economy

Credits are the central in-game currency that links gameplay performance to BCRC token access.

4.1 Daily Generation

The system generates approximately **999.36 Credits per day**, distributed across all active players.

Parameter	Value
Distribution interval	Every 30 minutes
Credits per interval	20.82 Credits (shared among active players)
Daily total	~999.36 Credits

4.2 Distribution Formula

Credits are distributed using a **power curve**, rewarding higher ranks disproportionately while keeping lower ranks fairly compensated:

Credits for player at rank R = (Score(R) / Total Score) × 20.82

Where:

Score(R) = 1 / (R^0.6)

Total Score = Sum of all active players' scores

The exponent **0.6** creates a dampened curve: top players earn significantly more, but every active player still receives a meaningful share.

Example (100 active players):

Rank	Approx. Credits/Day
1	~263
10	~22
50	~9
100	~6

4.3 Treasury-Eligible Credits

Not all Credits can be exchanged for BCRC. Only **Treasury-eligible Credits** — earned through ranking distribution while active — qualify for token claims. This prevents inactive accounts and non-game sources from draining the Treasury.

4.4 Deflationary Mechanics

Action	Effect
Exchange Credits → BCRC	Credits are burned (removed permanently)
HQ upgrades with Gold	Gold is burned
Exchange Credits → Gold	Credits remain in circulation
Exchange Gold → Credits	Gold is removed

This creates a natural economic balance: fewer Credits in circulation over time increases the value of remaining Credits and strengthens the incentive to participate actively.

5. BCRC Token Overview

Property	Detail
Full Name	BCRank Coin
Symbol	BCRC
Blockchain	Polygon Mainnet
Chain ID	137
Token Standard	ERC-20
Decimals	18
Contract	<code>0xA64657D89dD444Ec8aAc8dAD055d2a93CaE2bBBA</code>

BCRC is a utility token within the BC Ranking Game ecosystem. It represents on-chain value earned through gameplay and can be used to re-enter the Credits economy or held independently in any Polygon-compatible wallet.

6. Tokenomics

6.1 Initial Supply

At launch, **1,000,000,000 BCRC** (1 billion) tokens were minted.

6.2 Initial Allocation

Allocation	Amount	Percentage	Purpose
Development	500,000,000 BCRC	50.0%	Project development & operations
Public Sale	499,000,000 BCRC	49.9%	USDT token sale (first 60 days)
Treasury (initial)	1,000,000 BCRC	0.1%	Player reward pool seed
Total	1,000,000,000 BCRC	100%	

6.3 Monthly Emission

Every **30 days**, the BCRC smart contract mints **31,000 new tokens** directly to the Treasury contract.

Parameter	Value
Mint amount	31,000 BCRC
Interval	30 days
Recipient	BCRankCoinTreasury
Callable by	Anyone (when interval has passed)
Catch-up	Missed periods are minted in full (no cap)

Annual emission from minting: $31,000 \times 12 = 372,000$ BCRC per year

This controlled emission ensures a steady supply for active player rewards without unlimited inflation.

6.4 Supply Over Time (Illustrative)

Timeframe	Cumulative Minted (Treasury)
Launch	1,000,000 BCRC (initial)
After 1 year	$1,000,000 + 372,000 = 1,372,000$ BCRC in Treasury
After 5 years	$1,000,000 + 1,860,000 = 2,860,000$ BCRC in Treasury

Note: Total circulating supply also depends on sale activity, player claims, burns, and dev allocation usage.

7. Treasury & Distribution

The **BCRankCoinTreasury** contract holds BCRC tokens allocated for player rewards.

Property	Detail
Contract	0xAC2781295D0dE8624FF4E1C6E71Ce6D43C45843F

7.1 How Claims Work

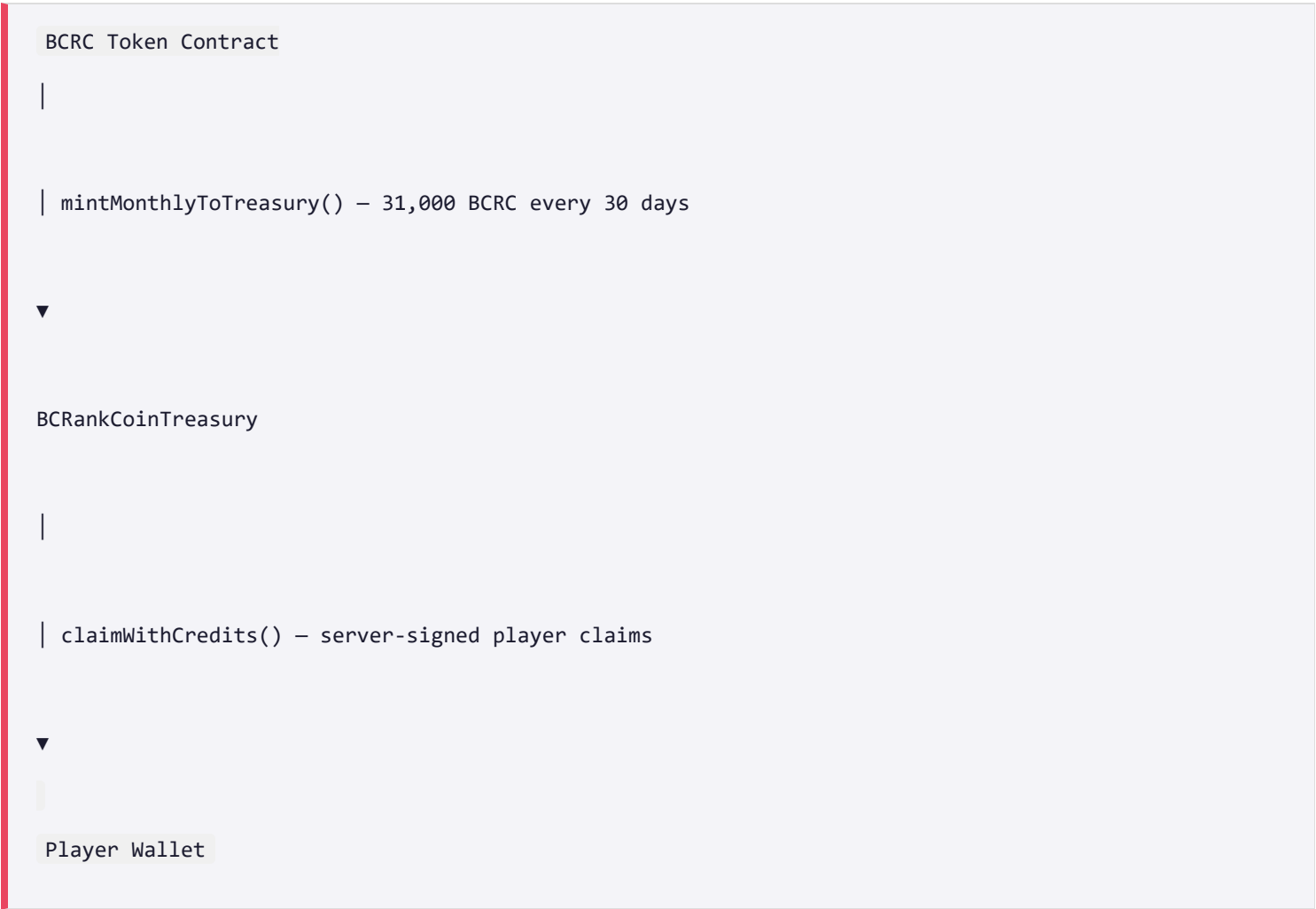
When an active player exchanges Credits for BCRC:

1. Player requests a token claim on bc-rankinggame.com
2. Server verifies: active status, sufficient Treasury-eligible Credits, valid wallet
3. Server generates a cryptographic signature authorizing the claim
4. Player submits an on-chain transaction calling `claimWithCredits()` on the Treasury contract
5. Treasury contract verifies the signature and transfers BCRC to the player's wallet
6. Equivalent Credits are burned in the game database

7.2 Security Properties

Feature	Description
No owner withdraw	The Treasury owner cannot freely drain player reward funds
Server-signed claims	Each payout requires a valid, time-limited server signature
Nonce protection	Each claim uses a unique nonce — signatures cannot be replayed
Pause capability	Claims can be paused in emergencies without affecting token contract
On-chain transparency	All claims are visible on PolygonScan

7.3 Monthly Mint Flow



8. Credits ↔ BCRC Exchange

8.1 Credits → BCRC (Claim)

Parameter	Value
Ratio	1 Credit = 1 BCRC
Eligibility	Active players with Treasury-eligible Credits
Method	<code>claimWithCredits()</code> on Treasury contract
Credits effect	Burned (permanently removed)

8.2 BCRC → Credits (Redeem)

Parameter	Value
Ratio	1 BCRC = 1 Credit
Method	Burn via BCRCBurnBridge contract
Token effect	Sent to burn address (<code>0x000...dEaD</code>)
Credits effect	Credited to player account

The **BCRCBurnBridge** exists because mobile wallets (e.g. MetaMask) often block direct transfers to the burn address. The bridge contract provides a standard `burnForCredits()` function that routes tokens to the dead address.

Contract	Address
BCRCBurnBridge	<code>0x487C1388Af10E26BDd6c960442e6DBe7dB5C59a3</code>

8.3 Why 1:1?

The 1:1 peg between Credits and BCRC keeps the in-game economy and on-chain token layer aligned. Credits earned through skill retain equal value when converted to BCRC, and BCRC can re-enter the game economy at the same rate.

9. Token Sale

During the first **60 days** after deployment, BCRC could be purchased directly with **USDT** through the BCRankCoinSale contract.

Parameter	Value
Contract	<code>0x998458565B81443222e86010Bac84D14add5d3CB</code>
Price	0.001 USDT per 1 BCRC
Duration	60 days from sale start
Allocation	Up to 499,000,000 BCRC
After sale	Unsold tokens moved to Treasury via <code>finalizeSale()</code>

After the sale period ends, the USDT purchase route closes permanently. Remaining unsold tokens are transferred to the Treasury to support future player rewards.

10. Smart Contracts

All BCRC ecosystem contracts are deployed on **Polygon Mainnet** and verified on PolygonScan.

Contract	Address	PolygonScan
BCRankCoin (BCRC Token)	<code>0xA64657D89dD444Ec8aAc8dAD055d2a93CaE2bBBA</code>	View Code
BCRankCoinTreasury	<code>0xAC2781295D0dE8624FF4E1C6E71Ce6D43C45843F</code>	View Code
BCRankCoinSale	<code>0x998458565B81443222e86010Bac84D14add5d3CB</code>	View Code
BCRCBurnBridge	<code>0x487C1388Af10E26BDd6c960442e6DBe7dB5C59a3</code>	View Code
BCRankCoinBundleVault (USDC)	<code>0x19AC02f2f856AB88E9946c6c6d11d7943Ad7db08</code>	View Code
BCRankCoinUsdtBundleVault (USDT)	<code>0x8E3F30A708070fD20aC47e81502e5677210E816C</code>	View Code

10.1 Contract Roles

BCRankCoin (Token)

- Mints initial supply and monthly Treasury allocation
- `mintMonthlyToTreasury()` — permissionless, interval-gated

BCRankCoinTreasury

- Holds player reward BCRC
- `claimWithCredits()` — server-signed player withdrawals
- No unrestricted owner withdrawal function

BCRankCoinSale

- `buyWithUSDT()` — public purchase during 60-day window
- `finalizeSale()` — moves unsold tokens to Treasury

BCRCBurnBridge

- `burnForCredits()` — burns BCRC for off-chain Credits

Bundle Vaults (USDC / USDT)

- Receive stablecoin payments for in-game bundles (Battlepoints, PowerPlay, combos)
- Separate from BCRC token sale — dedicated payment infrastructure for premium game items

11. Economic Flywheel

The BCRC ecosystem creates a self-reinforcing economic loop:





Key dynamics:

1. **Skill-based rewards** — better players earn more Credits
2. **Activity gate** — only active players (≤ 200 turns) participate in the token economy
3. **Deflationary pressure** — Credits and Gold are burned through upgrades and BCRC claims
4. **Steady emission** — 31,000 BCRC/month replenishes the Treasury for ongoing rewards
5. **Two-way bridge** — BCRC can flow in and out of the game at 1:1

12. Security & Transparency

Principle	Implementation
On-chain verification	All contracts verified on PolygonScan
No Treasury backdoor	Owner cannot freely withdraw player reward funds
Signature-based claims	Server authorizes each payout with cryptographic proof
Replay protection	Per-wallet nonces prevent duplicate claims
Public supply data	Total supply and mint events visible on-chain
Emergency controls	Claims can be paused without locking player wallets
Low fees	Polygon network keeps transaction costs minimal

Players can independently verify:

- Token total supply on PolygonScan
- Treasury balance
- Monthly mint transactions
- Their own claim and burn history

13. Roadmap & Vision

BCRC is designed as a long-term utility token tied to an actively maintained competitive game.

Current status (July 2026):

- ☒ BCRC live on Polygon Mainnet
- ☒ Treasury, Sale, Burn Bridge, and Bundle Vaults deployed
- ☒ Credits ↔ BCRC exchange operational
- ☒ Monthly mint mechanism active

Future direction:

- Expand player base and ranking competition
- Additional in-game utility for BCRC holders
- Community features and seasonal events
- Continued smart contract audits and transparency reporting

The core vision remains unchanged: **reward skillful, active gameplay with a transparent, on-chain token that players truly earn.**

14. Disclaimer

This whitepaper is for informational purposes only. It does not constitute financial, investment, legal, or tax advice.

- BCRC is a **utility token** within the BC Ranking Game ecosystem, not a security or investment product.
- Cryptocurrency and blockchain transactions involve **significant risk**, including total loss of value.
- Past in-game performance or token distribution does not guarantee future results.
- Smart contracts are deployed on a public blockchain; while audited and tested, no system is without risk.
- Always **Do Your Own Research (DYOR)** before interacting with any cryptocurrency.

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