



verichains

*SECURITY AUDIT OF*  
**DEVELAD ERC20 TOKEN**



**Public Report**

*Nov 14, 2024*

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*Driving Technology > Forward*

## ABBREVIATIONS

Name	Description
<b>Ethereum</b>	An open source platform based on blockchain technology to create and distribute smart contracts and decentralized applications.
<b>Ether (ETH)</b>	A cryptocurrency whose blockchain is generated by the Ethereum platform. Ether is used for payment of transactions and computing services in the Ethereum network.
<b>Smart contract</b>	A computer protocol intended to digitally facilitate, verify or enforce the negotiation or performance of a contract.
<b>Solidity</b>	A contract-oriented, high-level language for implementing smart contracts for the Ethereum platform.
<b>Solc</b>	A compiler for Solidity.
<b>ERC20</b>	ERC20 (BEP20 in Binance Smart Chain or xRP20 in other chains) tokens are blockchain-based assets that have value and can be sent and received. The primary difference with the primary coin is that instead of running on their own blockchain, ERC20 tokens are issued on a network that supports smart contracts such as Ethereum or Binance Smart Chain.



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## **EXECUTIVE SUMMARY**

This Security Audit Report was prepared by Verichains Lab on Nov 14, 2024. We would like to thank the DevelAD for trusting Verichains Lab in auditing smart contracts. Delivering high-quality audits is always our top priority.

This audit focused on identifying security flaws in code and the design of the Develad ERC20 Token. The scope of the audit is limited to the source code files provided to Verichains. Verichains Lab completed the assessment using manual, static, and dynamic analysis techniques.

**During the audit process, the audit team had identified no vulnerable issue in the smart contracts code.**

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# 1. MANAGEMENT SUMMARY

## 1.1. About Develad ERC20 Token

DevelAD is a pioneering platform in the world of sports, protected by a global patent. Built on cutting-edge technologies like Augmented Reality (AR), Virtual Reality (VR), Mixed Reality (MR), and Artificial Intelligence (AI), DevelAD offers users an entirely new and unique sports experience.

DevelAD brings together fans, athletes, sports clubs, and event organizers on an interactive platform that elevates the sports experience to a new level. AR technology allows users to interact by adding digital layers to real-world images, while VR transports users to a fully immersive and realistic virtual environment. MR combines the real and virtual worlds to create an engaging, blended experience. Supported by these advanced technologies, DevelAD enables users not only to watch but to actively participate in the sporting experience.

Additionally, DevelAD uses AI to deliver personalized content, tailored to users' interests and preferences, making the sports experience richer and more impactful. Through this personalization, fans feel more connected to the world of sports and enjoy unforgettable, immersive experiences.

DevelAD is an innovative platform that opens the door to a closer and more thrilling exploration of the sports world. By blending AR, VR, MR, and AI, DevelAD connects fans, athletes, sports clubs, managers, and event organizers in an interactive environment that breaks down barriers.

## 1.2. Audit Scope

This audit focused on identifying security flaws in code and the design of the Develad ERC20 Token that was deployed on BSC.

The latest version was made available in the course of the review:

FIELD	VALUE
Deployed Address	<a href="https://bscscan.com/address/0x0D1912B57F657299E745F73A3B8B14f0dcA6e16D">https://bscscan.com/address/0x0D1912B57F657299E745F73A3B8B14f0dcA6e16D</a>
Tx Deploy	<a href="https://bscscan.com/tx/0xda0527bfc77cc9122f935400f3dfea633432a1b998b4a4b4e91791bea7248edb">https://bscscan.com/tx/0xda0527bfc77cc9122f935400f3dfea633432a1b998b4a4b4e91791bea7248edb</a>
Deployer	<a href="https://bscscan.com/address/0x16a972236ef7e2dec1a76af7c9097d9f4d29bd8c">https://bscscan.com/address/0x16a972236ef7e2dec1a76af7c9097d9f4d29bd8c</a>

FIELD	VALUE
Block Number	37421819

*Table 1. Develad Token's deployed properties*

### 1.3. Audit Methodology

Our security audit process for smart contract includes two steps:

- Smart contract codes are scanned/tested for commonly known and more specific vulnerabilities using public and RK87, our in-house smart contract security analysis tool.
- Manual audit of the codes for security issues. The contracts are manually analyzed to look for any potential problems.

Following is the list of commonly known vulnerabilities that were considered during the audit of the smart contract:

- Integer Overflow and Underflow
- Timestamp Dependence
- Race Conditions
- Transaction-Ordering Dependence
- DoS with (Unexpected) revert
- DoS with Block Gas Limit
- Gas Usage, Gas Limit and Loops
- Redundant fallback function
- Unsafe type Inference
- Reentrancy
- Explicit visibility of functions state variables (external, internal, private and public)
- Logic Flaws

For vulnerabilities, we categorize the findings into categories as listed in table below, depending on their severity level:

SEVERITY LEVEL	DESCRIPTION
<b>CRITICAL</b>	A vulnerability that can disrupt the contract functioning; creates a critical risk to the contract; required to be fixed immediately.

## Report for DevelAD

### Security Audit – Develad ERC20 Token

Version: 1.0 – Public Report

Date: Nov 14, 2024



SEVERITY LEVEL	DESCRIPTION
HIGH	A vulnerability that could affect the desired outcome of executing the contract with high impact; needs to be fixed with high priority.
MEDIUM	A vulnerability that could affect the desired outcome of executing the contract with medium impact in a specific scenario; needs to be fixed.
LOW	An issue that does not have a significant impact, can be considered as less important.

*Table 2. Severity levels*

#### 1.4. Disclaimer

DevelAD acknowledges that the security services provided by Verichains, are conducted to the best of their professional abilities but cannot guarantee 100% coverage of all security vulnerabilities. DevelAD understands and accepts that despite rigorous auditing, certain vulnerabilities may remain undetected. Therefore, DevelAD agrees that Verichains shall not be held responsible or liable, and shall not be charged for any hacking incidents that occur due to security vulnerabilities not identified during the audit process.

#### 1.5. Acceptance Minute

This final report served by Verichains to the DevelAD will be considered an Acceptance Minute. Within 7 days, if no any further responses or reports is received from the DevelAD, the final report will be considered fully accepted by the DevelAD without the signature.

## 2. AUDIT RESULT

### 2.1. Overview

The Develad ERC20 Token was written in **Solidity** language, with the required version to be **^0.8.20**.

The contracts extend **ERC20**, **ERC20Permit**, **ERC20Burnable**, **ERC20Pausable**, and **Ownable** from the **OpenZeppelin** library. The token contract is an ERC20 token with a pause and unpause mechanism and an update mechanism that overrides **ERC20** and **ERC20Pausable**. Only the owner can pause or unpause.

Below table describes some properties of the audited Develad ERC20 Token (as of the report writing time):

PROPERTY	VALUE
<b>Name</b>	Develad Token
<b>Symbol</b>	DVL
<b>Decimals</b>	18
<b>Total Supply</b>	250,000,000 (x10 <sup>18</sup> ) Note: the number of decimals is 18, so the total representation token will be 250,000,000 or 250 million.

*Table 3. Pentagon Token's properties*

### 2.2. Findings

During the audit process, the audit team found no vulnerability in the given version of Develad ERC20 Token.



### 3. VERSION HISTORY

Version	Date	Status/Change	Created by
1.0	Nov 14, 2024	Public Report	Verichains Lab

*Table 4. Report versions history*