BEAN.SecondLive

Smart Contract Audit Report

SYSFIXED

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AUDITED DETAILS

Audited Project

Project name	Token ticker	Blockchain
BEAN.SecondLive	BEAN	Binance Smart Chain

Addresses

Contract address	0x07da81e9a684ab87fad7206b3bc8d0866f48cc7c
Contract deployer address	0x2e637162072877a28D33a4f155B8a5E5E1Ac0293

Project Website

https://secondlive.world/

Codebase

https://bscscan.com/address/0x07da81e9a684ab87fad7206b3bc8d0866f48cc7c#code

SUMMARY

SecondLive is a hub for Metaverse inhabitants. More than 1 million users are gathering here to facilitate self-expression, unleash creativity and build a dreaming parallel universe. Led invested by Binance Labs, the SecondLive team is expertise in virtual space creation for large-scale events and Metaverse infrastructure building. With the assistance of UGC and AI-generated content, SecondLive will create a Web3 open Metaverse that serves 1 billion people. There are four main modules in the process of using SecondLive.

Contract Summary

Documentation Quality

BEAN.SecondLive provides a very good documentation with standard of solidity base code.

- The technical description is provided clearly and structured and also dont have any high risk issue.

Code Quality

The Overall quality of the basecode is standard.

- Standard solidity basecode and rules are already followed by BEAN.SecondLive with the discovery of several low issues.

Test Coverage

Test coverage of the project is 100% (Through Codebase)

Audit Findings Summary

- SWC-101 | It is recommended to use vetted safe math libraries for arithmetic operations consistently on lines 362, 452, 362 and 452.
- SWC-103 | Pragma statements can be allowed to float when a contract is intended on lines 57, 151, 336, 412 and 567.

CONCLUSION

We have audited the BEAN.SecondLive project was released on December 2021 to discover issues and identify potential security vulnerabilities in BEAN.SecondLive Project. This process is used to find technical issues and security loopholes which might be found in the smart contract.

The security audit report provides a satisfactory result with some low-risk issues.

The issues found in the BEAN.SecondLive smart contract codes do not pose a considerable risk. The writing of the contract is close to the standard of writing contracts in general. The low-risk issues found are some arithmetic operation issues, and a floating pragma is set. The current pragma Solidity directive is "">=0.6.00.8.0"". It is recommended to specify a fixed compiler version to ensure that the bytecode produced does not vary between builds. This is especially important if you rely on bytecode-level verification of the code.

AUDIT RESULT

Article	Category	Description	Result
Default Visibility	SWC-100 SWC-108	Functions and state variables visibility should be set explicitly. Visibility levels should be specified consciously.	PASS
Integer Overflow and Underflow	SWC-101	If unchecked math is used, all math operations should be safe from overflows and underflows.	ISSUE FOUND
Outdated Compiler Version	SWC-102	It is recommended to use a recent version of the Solidity compiler.	PASS
Floating Pragma	SWC-103	Contracts should be deployed with the same compiler version and flags that they have been tested thoroughly.	ISSUE FOUND
Unchecked Call Return Value	SWC-104	The return value of a message call should be checked.	PASS
Unprotected Ether Withdrawal	SWC-105	Due to missing or insufficient access controls, malicious parties can withdraw from the contract.	PASS
SELFDESTRUCT Instruction	SWC-106	The contract should not be self-destructible while it has funds belonging to users.	PASS
Reentrancy	SWC-107	Check effect interaction pattern should be followed if the code performs recursive call.	PASS
Uninitialized Storage Pointer	SWC-109	Uninitialized local storage variables can point to unexpected storage locations in the contract.	PASS
Assert Violation	SWC-110 SWC-123	Properly functioning code should never reach a failing assert statement.	PASS
Deprecated Solidity Functions	SWC-111	Deprecated built-in functions should never be used.	PASS
Delegate call to Untrusted Callee	SWC-112	Delegatecalls should only be allowed to trusted addresses.	PASS

DoS (Denial of Service)	SWC-113 SWC-128	Execution of the code should never be blocked by a specific contract state unless required.	PASS
Race Conditions	SWC-114	Race Conditions and Transactions Order Dependency should not be possible.	PASS
Authorization through tx.origin	SWC-115	tx.origin should not be used for authorization.	PASS
Block values as a proxy for time	SWC-116	Block numbers should not be used for time calculations.	PASS
Signature Unique ID	SWC-117 SWC-121 SWC-122	Signed messages should always have a unique id. A transaction hash should not be used as a unique id.	PASS
Incorrect Constructor Name	SWC-118	Constructors are special functions that are called only once during the contract creation.	PASS
Shadowing State Variable	SWC-119	State variables should not be shadowed.	PASS
Weak Sources of Randomness	SWC-120	Random values should never be generated from Chain Attributes or be predictable.	PASS
Write to Arbitrary Storage Location	SWC-124	The contract is responsible for ensuring that only authorized user or contract accounts may write to sensitive storage locations.	PASS
Incorrect Inheritance Order	SWC-125	When inheriting multiple contracts, especially if they have identical functions, a developer should carefully specify inheritance in the correct order. The rule of thumb is to inherit contracts from more /general/ to more /specific/.	PASS
Insufficient Gas Griefing	SWC-126	Insufficient gas griefing attacks can be performed on contracts which accept data and use it in a sub-call on another contract.	PASS
Arbitrary Jump Function	SWC-127	As Solidity doesnt support pointer arithmetics, it is impossible to change such variable to an arbitrary value.	PASS

Typographical Error	SWC-129	A typographical error can occur for example when the intent of a defined operation is to sum a number to a variable.	PASS
Override control character	SWC-130	Malicious actors can use the Right-To-Left-Override unicode character to force RTL text rendering and confuse users as to the real intent of a contract.	PASS
Unused variables	SWC-131 SWC-135	Unused variables are allowed in Solidity and they do not pose a direct security issue.	PASS
Unexpected Ether balance	SWC-132	Contracts can behave erroneously when they strictly assume a specific Ether balance.	PASS
Hash Collisions Variable	SWC-133	Using abi.encodePacked() with multiple variable length arguments can, in certain situations, lead to a hash collision.	PASS
Hardcoded gas amount	SWC-134	The transfer() and send() functions forward a fixed amount of 2300 gas.	PASS
Unencrypted Private Data	SWC-136	It is a common misconception that private type variables cannot be read.	PASS

SMART CONTRACT ANALYSIS

Started	Thursday Dec 23 2021 04:07:30 GMT+0000 (Coordinated Universal Time)
Finished	Friday Dec 24 2021 10:28:24 GMT+0000 (Coordinated Universal Time)
Mode	Standard
Main Source File	SecondLiveBeanProxy.sol

Detected Issues

ID	Title	Severity	Status
SWC-101	ARITHMETIC OPERATION "-" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "-" DISCOVERED	low	acknowledged
SWC-101	COMPILER-REWRITABLE "<UINT> - 1" DISCOVERED	low	acknowledged
SWC-101	COMPILER-REWRITABLE "<UINT> - 1" DISCOVERED	low	acknowledged
SWC-103	A FLOATING PRAGMA IS SET.	low	acknowledged
SWC-103	A FLOATING PRAGMA IS SET.	low	acknowledged
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SWC-101 | ARITHMETIC OPERATION "-" DISCOVERED

LINE 362

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- SecondLiveBeanProxy.sol

Locations

```
361   */
362   function _implementation() internal view virtual override returns (address impl) {
363   bytes32 slot = _IMPLEMENTATION_SLOT;
364   // solhint-disable-next-line no-inline-assembly
365   assembly {
366
```

SWC-101 | ARITHMETIC OPERATION "-" DISCOVERED

LINE 452

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- SecondLiveBeanProxy.sol

Locations

```
451   } else {
452   _fallback();
453   }
454   }
455
456
```

SWC-101 | COMPILER-REWRITABLE "<UINT> - 1" DISCOVERED

LINE 362

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- SecondLiveBeanProxy.sol

Locations

```
361   */
362   function _implementation() internal view virtual override returns (address impl) {
363   bytes32 slot = _IMPLEMENTATION_SLOT;
364   // solhint-disable-next-line no-inline-assembly
365   assembly {
366
```

SWC-101 | COMPILER-REWRITABLE "<UINT> - 1" DISCOVERED

LINE 452

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- SecondLiveBeanProxy.sol

Locations

```
451   } else {
452   _fallback();
453   }
454   }
455
456
```

SWC-103 | A FLOATING PRAGMA IS SET.

LINE 57

low SEVERITY

The current pragma Solidity directive is ""=0.6.0<0.8.0"". It is recommended to specify a fixed compiler version to ensure that the bytecode produced does not vary between builds. This is especially important if you rely on bytecode-level verification of the code.

Source File

- SecondLiveBeanProxy.sol

Locations

```
56   *
57   * This function does not return to its internall call site, it will return directly
to the external caller.
58   */
59   function _delegate(address implementation) internal virtual {
60   // solhint-disable-next-line no-inline-assembly
61
```

SWC-103 | A FLOATING PRAGMA IS SET.

LINE 151

low SEVERITY

The current pragma Solidity directive is ""^0.6.2<0.8.0"". It is recommended to specify a fixed compiler version to ensure that the bytecode produced does not vary between builds. This is especially important if you rely on bytecode-level verification of the code.

Source File

- SecondLiveBeanProxy.sol

Locations

```
150   function isContract(address account) internal view returns (bool) {
151   // This method relies on extcodesize, which returns 0 for contracts in
152   // construction, since the code is only stored at the end of the
153   // constructor execution.
154
155
```

SWC-103 | A FLOATING PRAGMA IS SET.

LINE 336

low SEVERITY

The current pragma Solidity directive is ""=0.6.0<0.8.0"". It is recommended to specify a fixed compiler version to ensure that the bytecode produced does not vary between builds. This is especially important if you rely on bytecode-level verification of the code.

Source File

- SecondLiveBeanProxy.sol

Locations

```
335   *
336   * If `_data` is nonempty, it's used as data in a delegate call to `_logic`. This
will typically be an encoded
337   * function call, and allows initializating the storage of the proxy like a Solidity
constructor.
338   */
339   constructor(address _logic, bytes memory _data) public payable {
340
```

SWC-103 | A FLOATING PRAGMA IS SET.

LINE 412

low SEVERITY

The current pragma Solidity directive is ""=0.6.0<0.8.0"". It is recommended to specify a fixed compiler version to ensure that the bytecode produced does not vary between builds. This is especially important if you rely on bytecode-level verification of the code.

Source File

- SecondLiveBeanProxy.sol

Locations

```
411   * that call matches one of the admin functions exposed by the proxy itself.
412   * 2. If the admin calls the proxy, it can access the admin functions, but its calls
will never be forwarded to the
413   * implementation. If the admin tries to call a function on the implementation it
will fail with an error that says
414   * "admin cannot fallback to proxy target".
415   *
416
```

SWC-103 | A FLOATING PRAGMA IS SET.

LINE 567

low SEVERITY

The current pragma Solidity directive is ""^0.6.0"". It is recommended to specify a fixed compiler version to ensure that the bytecode produced does not vary between builds. This is especially important if you rely on bytecode-level verification of the code.

Source File

- SecondLiveBeanProxy.sol

Locations

```
566   }
567   }
568
```

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