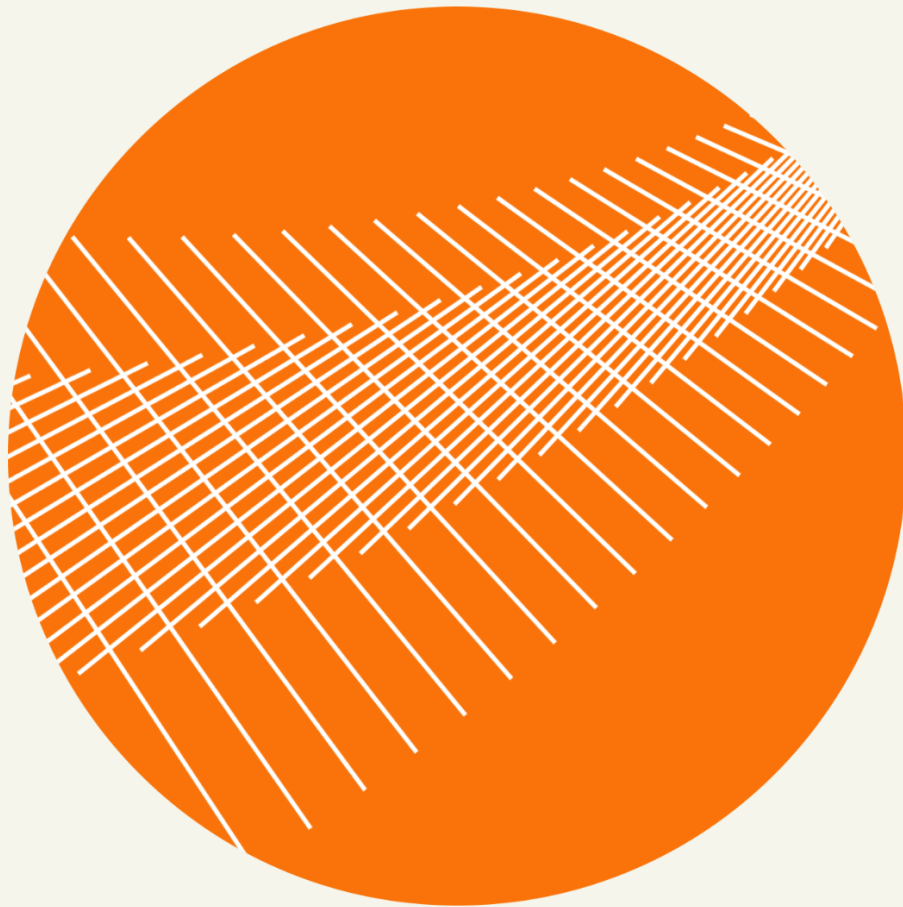


# CTDSEC

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# Smart contract security audit Hestia - PASS

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# 1.0 Introduction

## 1.1 Project engagement

During January of 2025, Hestia team engaged CTDSec to audit smart contracts that they created. The engagement was technical in nature and focused on identifying security flaws in the design and implementation of the contracts. Hestia provided CTDSec with access to their code repository and whitepaper.

## 1.2 Disclaimer

It should be noted that this audit is not an endorsement of the reliability or effectiveness of the contract, rather limited to an assessment of the logic and implementation. In order to ensure a secure contract that's able to withstand the network's fast-paced and rapidly changing environment, we at CTDSec recommend that Hestia team put in place a bug bounty program to encourage further and active analysis of the smart contract.

## 2.0 Coverage

### 2.1 Target Code and Revision

For this audit, we performed research, investigation, and review of the Hestia contracts followed by issue reporting, along with mitigation and remediation instructions outlined in this report. The following code files are considered in-scope for the review:

Source file:

<https://basescan.org/address/0x167d84bd3875042aa00e2a187f4fed9a017cd099#code>

## 2.2 Attacks made to the contract

In order to check for the security of the contract, we tested several attacks in order to make sure that the contract is secure and follows best practices.

No	Issue description.
1	Compiler warnings.
2	Race conditions and Reentrancy. Cross-function race conditions.
3	Possible delays in data delivery.
4	Oracle calls.
5	Front running.
6	Timestamp dependence.
7	Integer Overflow and Underflow.
8	DoS with Revert.
9	DoS with block gas limit.
10	Methods execution permissions.
11	Economy model. If application logic is based on an incorrect economic model, the application would not function correctly and participants would incur financial losses. This type of issue is most often found in bonus rewards systems, Staking and Farming contracts, Vault and Vesting contracts, etc.
12	The impact of the exchange rate on the logic.
13	Private user data leaks.
14	Malicious Event log.
15	Scoping and Declarations.
16	Uninitialized storage pointers.
17	Arithmetic accuracy.
18	Design Logic.

19	Cross-function race conditions.
20	Safe Zeppelin module.
21	Fallback function security.
22	Overpowered functions / Owner privileges

## 3.0 Security Issues

### 3.1 High severity issues [1 - Fixed]

#### 1. Unbounded Slippage in Swaps

**Contract:** YorpyController.sol

**Function:** swap(address tokenIn, address tokenOut, uint256 amount)

**Issue:** The direct swap functionality, executed via swap(address tokenIn, address tokenOut, uint256 amount), leverages the following code:

```
uint160 sqrt = zeroForOne ? MIN_SQRT_RATIO + 1 : MAX_SQRT_RATIO - 1;
POOL.swap(
    address(this),
    zeroForOne,
    int256(amount),
    sqrt,
    ...
);
```

This setup grants the contract the ability to accept any execution price provided by the pool. In scenarios where there is low liquidity, the presence of malicious liquidity providers, or if a miner performs a front-running attack to manipulate the price, the contract becomes vulnerable. Specifically, it could result in the contract being forced to execute a swap of USDC (or YORPY) at a significantly unfavorable price, draining large portions of the controller's funds in a single transaction.

Furthermore, because these swaps can be triggered automatically via functions such as smokeFees() or causeChaos(), an attacker can strategically wait for a large swap to be initiated, then manipulate the pool price by executing a sandwich attack. This is particularly concerning when SMOKE\_PUBLIC is set to true, as it allows any user to call the smokeFees() function, thus enabling a broader attack surface for potential exploitation.

**Recommendation:** Implement slippage protections in all swap paths (including the repeated "chaos" swaps). The simplest approach is to incorporate a minOutput parameter or an acceptable price range.

**Fixed version:** <https://basescan.org/address/0x3B47651C477751eF2d46cBC890f7f91Ea441749E#code>

## 3.2 Medium severity issues [0]

No medium findings were found.

## 3.3 Low severity issues [2 - Fixed]

### 1. Missing Verification That the NFT Matches the Intended Pool

**Contract:** YorpyController.sol

**Issue:** The contract never verifies that the NFT\_ID passed to setNft() actually corresponds to the USDC/YORPY pool at POOL\_FEE. A malicious or erroneous NFT\_ID could belong to a different pair, or an empty position, causing swaps or liquidity operations to malfunction or revert.

**Recommendation:** upon setNft query the Position Manager (positions(NFT\_ID)) to ensure token0 == address(USDC) && token1 == address(YORPY) (or vice versa) and fee == POOL\_FEE

**Fixed version:** <https://basescan.org/address/0x3B47651C477751eF2d46cBC890f7f91Ea441749E#code>

### 2. Absolute Limits for Chaos and Feed

**Contract:** YorpyController.sol

**Issue:** SMOKE\_CHAOS\_RATIO is an absolute USDC cap and the code picks chaosBalance from getUsdcChaosBalance() each iteration might do a different "bounded" swap so of the iteration results in zero YORPY gain (due to partial slippage or price movement).

**Recommendation:** Emit an event when the loop ends early

**Fixed version:** <https://basescan.org/address/0x3B47651C477751eF2d46cBC890f7f91Ea441749E#code>



## 3.4 Informational Findings [1]

### 1. Optimize Storage Access

**Contract:** YorpyController.sol

Repeated calls to `getUsdcTotalBalance()` or `YORPY.balanceOf(address(this))` within a single function can be cached in local variables to reduce minor gas overhead.

## 4.0 Testing coverage

During the testing phase, custom use cases were written to cover all the logic of contracts

*\*Check "5 Annexes" to see the testing code.*

**Hestia contracts tests**

```

tests/test_yorpy_ctrl.py::test_set_nft RUNNING
Transaction sent: 0x1c0292673abf22d046b4796ae88193686c8a7ddabe9b87523e9bb46c265cb480
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 0
USDC.constructor confirmed Block: 1 Gas used: 471356 (3.93%)
USDC deployed at: 0x3194cBDC3dbcd3E11a07892e7bA5c3394048Cc87

Transaction sent: 0x4bcb5a2d21b67f8f06c0235be12e1e43ef556a7be051c5eae08050b7e58f71c1
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 1
WETH9.constructor confirmed Block: 2 Gas used: 471464 (3.93%)
WETH9 deployed at: 0x602C71e4DAC47a042Ee7f46E0aee17F94A3bA0B6

Transaction sent: 0x5728da15e83af2ede98c18ec95000ed788858beb9c2d1c2a47579659467797cf
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 2
UniswapV3Factory.constructor confirmed Block: 3 Gas used: 5421585 (45.18%)
UniswapV3Factory deployed at: 0xE7eD6747FaC5360f88a2EFC03E00d25789F69291

Transaction sent: 0x9764bae544113b8452e6e77cb255da5b75e689385b01d2cdf4bb16545455e19a
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 3
UniswapV3Factory.createPool confirmed Block: 4 Gas used: 4463645 (37.20%)

Transaction sent: 0x5484903017ef697d4eed16b06dcd91c7b78c005ea88ff73a02159ea627c64612
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 4
SwapRouter.constructor confirmed Block: 5 Gas used: 1965571 (16.38%)
SwapRouter deployed at: 0xe0aA552A10d7EC8760Fc6c246D391E698a82dDf9

Transaction sent: 0x9e3c5248679a51e5ae623e115bea7f7f60cdf88ce950c981d67b050add0c355f
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 5
NFTDescriptor.constructor confirmed Block: 6 Gas used: 4627980 (38.57%)
NFTDescriptor deployed at: 0x6b4BDe1086912A6Cb24ce3dB43b3466e6c72AFd3

Transaction sent: 0x77a3d7fb29ff2647dcad489e8e8fda75b074f718920414c265275c10604d597c
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 6
NonfungibleTokenPositionDescriptor.constructor confirmed Block: 7 Gas used: 938430 (7.82%)
NonfungibleTokenPositionDescriptor deployed at: 0x9E4c14403d7d9A8A782044E86a93CAE09D7B2ac9

Transaction sent: 0x0bfc17363d47ac0230a280c53a395b8df60a760f7dd3e9c429da4d98288cdf98
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 7
NonfungiblePositionManager.constructor confirmed Block: 8 Gas used: 4431392 (36.93%)
NonfungiblePositionManager deployed at: 0xcCB53c9429d32594F404d01fbe9E65ED1DCda8D9

Transaction sent: 0x0419d4524b949c15453335dcfa8ee63ad86e0a5d2e200da0ec510433845356d8
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 8
YorpyController.constructor confirmed Block: 9 Gas used: 5069300 (42.24%)
YorpyController deployed at: 0x420b1099B9eF5baba6D92029594eF45E19A04A4A

Transaction sent: 0xc619d88a6069d2a7e61c166d47e3a9ef309ef568bd7b1cc61fa639233cb41f18
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 0
YorpyController.setNft confirmed (UNAUTHORIZED) Block: 10 Gas used: 22348 (0.19%)

Transaction sent: 0x229d37609a3ab424f34a00033e6708600c4ee2fa8517add1aa09c70beb6a78db
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 9
YorpyController.setNft confirmed (invalidNftId) Block: 11 Gas used: 28237 (0.24%)

Transaction sent: 0x95d8e5723c5a85da6cd55dc5620ac194276bf5e92c9beb9289eb9f9319365f
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 10
YorpyController.setNft confirmed (invalidPoolAddress) Block: 12 Gas used: 52788 (0.44%)

Transaction sent: 0xfa3254c19bce1c828c761da72f5882083f7e7c219af9e66bf1dff2d2cef5105c
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 11
UniswapV3Factory.createPool confirmed Block: 13 Gas used: 4463636 (37.20%)

Transaction sent: 0x21d3a8ef8ed76290451d7bc0d9fe874cd64aee92a3759097354b478e0cff685a
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 12
YorpyController.setNft confirmed Block: 14 Gas used: 276085 (2.30%)

tests/test_yorpy_ctrl.py::test_set_nft PASSED

```

```
tests/test_yorpy_ctrl.py::test_lock_nft RUNNING
Transaction sent: 0x1ed4fb74f6b38493a865d2990c7a002469b214c5ca110d0f41ca0b2067c20aef
  Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 13
  USDC.constructor confirmed Block: 15 Gas used: 471356 (3.93%)
  USDC deployed at: 0xe692cf21b12e0b2717c4bf647f9768fa58861c8b

Transaction sent: 0xc7d5ceb88bea58d81ffad19e1278a5a3177dad561f688edb7e2972cec2fa4a4b
  Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 14
  WETH9.constructor confirmed Block: 16 Gas used: 471464 (3.93%)
  WETH9 deployed at: 0xe65A7a341978d59d40d30FC23F5014FACB4f575A

Transaction sent: 0x8a1edcf0ed1839880efecc161e86b2f5fa5ddb2116572a7e0ab9a093c1d32841
  Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 15
  UniswapV3Factory.constructor confirmed Block: 17 Gas used: 5421585 (45.18%)
  UniswapV3Factory deployed at: 0x30375B532345B01cB8c2AD12541b09E9Aa53A93d

Transaction sent: 0xf0a98a26963d14907df281e0f305887a9b182c0d869bf0f321096703c5ef71f0
  Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 16
  UniswapV3Factory.createPool confirmed Block: 18 Gas used: 4463636 (37.20%)

Transaction sent: 0xcfc6cc43ab0845062b3ee6c420a29dd82ffd170e3409c1ffbd0a1509b0fd52ca4
  Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 17
  SwapRouter.constructor confirmed Block: 19 Gas used: 1965583 (16.38%)
  SwapRouter deployed at: 0xFbD588c72B438faD4Cf7cD879c8F730Faa213Da0

Transaction sent: 0x4ddd287720c5121115c2c14492aea2145737c8dbb2a849c371ccc14c01e00e17
  Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 18
  NFTDescriptor.constructor confirmed Block: 20 Gas used: 4627980 (38.57%)
  NFTDescriptor deployed at: 0xed00238F9A0F7b4d93842033cdf56cCB32C781c2

Transaction sent: 0x8b4aaa796e0fad118c09854d5027f46327549d2b53834fa488a3bc9c142666c5
  Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 19
  NonfungibleTokenPositionDescriptor.constructor confirmed Block: 21 Gas used: 938418 (7.82%)
  NonfungibleTokenPositionDescriptor deployed at: 0xDae02e4fE488952cFB8c95177154D188647a0146

Transaction sent: 0x2faae687e30af95d281d9af87421597dc445380b3d5c06388d293c3b74cd727e
  Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 20
  NonfungiblePositionManager.constructor confirmed Block: 22 Gas used: 4431404 (36.93%)
  NonfungiblePositionManager deployed at: 0xdCF93F11ef216cEC9C07fd31dD801c9b2b39Afb4

Transaction sent: 0xa94529f1d5aa1d0566b9ef4643905ae91950ee222f568979951acda729f899c5
  Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 21
  YorpyController.constructor confirmed Block: 23 Gas used: 5069312 (42.24%)
  YorpyController deployed at: 0xBcb61491F1859f53438918F1A5aFCA542Af9D397

Transaction sent: 0x01b88e2a5f7e86fa16f044ff1754fa958d028c3df1244c4adf7b9ade31e626c6
  Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 1
  YorpyController.lockNFT confirmed (UNAUTHORIZED) Block: 24 Gas used: 22393 (0.19%)

Transaction sent: 0x70c4700aef059fcdab83cd642512a50141c0df3e60342de27ef43acb6b8168b1
  Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 22
  YorpyController.lockNFT confirmed (nftNotSet) Block: 25 Gas used: 29112 (0.24%)

Transaction sent: 0xfa3d13d9ff0e0ebabf24e42672a618bd5268995e7d95558dc65fd53e1a006099
  Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 23
  UniswapV3Factory.createPool confirmed Block: 26 Gas used: 4463645 (37.20%)

Transaction sent: 0xdc9bfc26e3b2d1843e59e40e19db89985818aa6d9334a6700370e90fbcd5a32d
  Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 24
  YorpyController.setNft confirmed Block: 27 Gas used: 276085 (2.30%)

Transaction sent: 0xaea2772ccf5346ded5e6d24e53dcfe03c4fea9abc9a83c9f28676885cb2f6f79
  Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 25
  YorpyController.lockNFT confirmed (ERC721: invalid token ID) Block: 28 Gas used: 32367 (0.27%)

tests/test_yorpy_ctrl.py::test_lock_nft PASSED
```

```

tests/test_yorpy_ctrl.py::test_set_usdc_weth_pool RUNNING
Transaction sent: 0x24e5a15264bc5e0d38f51d3bd61dd58647242058e58ad6a2d859a7a26e5d64a4
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 26
USDC.constructor confirmed Block: 29 Gas used: 471356 (3.93%)
USDC deployed at: 0xAdeD61D42dE86f9058386D1D0d739d20C7eAfC43

Transaction sent: 0xd7785e53bdd77b0f40046e94eea5cf16247a68b778e2849bf3446d3f9d3f8329
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 27
WETH9.constructor confirmed Block: 30 Gas used: 471464 (3.93%)
WETH9 deployed at: 0x832698Daec363C9A7aB036C224Af5B21280b3AC6

Transaction sent: 0x10d05dc081f880b1b1f2981d85532b3b644c7fca35b127bd1f85d7811bf15320
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 28
UniswapV3Factory.constructor confirmed Block: 31 Gas used: 5421585 (45.18%)
UniswapV3Factory deployed at: 0xA95916C3D979400C7443961330b3092510a229Ba

Transaction sent: 0x00078f429aecf9886087def83eba08967f055caba3d1336bf161efe5287b6150
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 29
UniswapV3Factory.createPool confirmed Block: 32 Gas used: 4463636 (37.20%)

Transaction sent: 0x9b2ae96b42a2bc885782c7401938ecda93c7e8856e6e6199961cb6b349798728
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 30
SwapRouter.constructor confirmed Block: 33 Gas used: 1965583 (16.38%)
SwapRouter deployed at: 0xF06D5f5BFFFCB6a52c84cfebc03AD35637728E73

Transaction sent: 0xcd0a1fb1f51d9759b12d5ffbdb09c0dc0b97b8ff4af6aebbec22735582de2127
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 31
NFTDescriptor.constructor confirmed Block: 34 Gas used: 4627980 (38.57%)
NFTDescriptor deployed at: 0x82c83b7f88aef2eD99d4869D547b6ED28e69C8df

Transaction sent: 0x22590c33cd9708fa7903a0658da4f346cf0d422beca6f74f395cbdac5cab2ca9
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 32
NonfungibleTokenPositionDescriptor.constructor confirmed Block: 35 Gas used: 938430 (7.82%)
NonfungibleTokenPositionDescriptor deployed at: 0x724Ca58E1e6e64BFB1E15d7Eec0fe1E5f581c7bD

Transaction sent: 0x57bfd81d3a624c363ea0f665d37efb83e31b1cd8033151d24d19fac5ec670122
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 33
NonfungiblePositionManager.constructor confirmed Block: 36 Gas used: 4431404 (36.93%)
NonfungiblePositionManager deployed at: 0x34b97ffa01dc0DC959c5f1176273D0de3be914C1

Transaction sent: 0xb5a90d67aede4f78ab2f732789ce468c08a1e446c8b600763f579c2da3332d5e
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 34
YorpyController.constructor confirmed Block: 37 Gas used: 5069312 (42.24%)
YorpyController deployed at: 0xc830Ad2FDfCC2f368fE5DeC93b1Dc72ecABb3691

Transaction sent: 0xefbd037b370470d7bbbad4b77786b415d7032e0cb09da2ee972dc8daef8296f9
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 2
YorpyController.setUsdcWethPool confirmed (UNAUTHORIZED) Block: 38 Gas used: 22498 (0.19%)

Transaction sent: 0xd3c8ecfa316f4d4e92d4471eb9b286134fd5166d35da68a73262ca24f7fe187e
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 35
YorpyController.setUsdcWethPool confirmed (invalidPoolAddress) Block: 39 Gas used: 28408 (0.24%)

Transaction sent: 0xf2e978dfe8d8d7c2aed0113e9b977655d26091966a80c726202291d69e371f92
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 36
USDC.constructor confirmed Block: 40 Gas used: 471356 (3.93%)
USDC deployed at: 0x741e3E1f81041c62C2A97d0b6E567AcaB09A6232

Transaction sent: 0x25583074819489e53b2078268e7394d7e819101c551c50ab19f239175f6e1d27
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 37
WETH9.constructor confirmed Block: 41 Gas used: 471464 (3.93%)
WETH9 deployed at: 0x4B0FccF53589c1F185B35db88bB315a0bBF9a3e0

Transaction sent: 0xee4f7dd9f010599a2bbc997fa81e875244ad94f07e8603dfe9a0a7cb0da74937
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 38
UniswapV3Factory.createPool confirmed Block: 42 Gas used: 4463645 (37.20%)

Transaction sent: 0x5a1fb3adb58af34cd392590ac99fbf502de8c52ea9d8cb69f72ebe44c98d3c38
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 39
YorpyController.setUsdcWethPool confirmed (invalidPoolTokens) Block: 43 Gas used: 31791 (0.26%)

Transaction sent: 0x7a722169679168bdba1ae48f4eace9239cad18856438a2969be08dfed12caf39
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 40
YorpyController.setUsdcWethPool confirmed Block: 44 Gas used: 138928 (1.16%)

```

```
tests/test_yorpy_ctrl.py::test_set_usdc_weth_pool PASSED
tests/test_yorpy_ctrl.py::test_set_automator RUNNING
Transaction sent: 0x2a5e0b9ce101135ad4e8e0e38896babc72a46cdfca7bfbdddfb35c97be128872
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 41
USDC.constructor confirmed Block: 45 Gas used: 471356 (3.93%)
USDC deployed at: 0x5847798CE8c89e3Fff59AE5fA30BEC0d406b5687

Transaction sent: 0x8208207395d4be96b60fc0579282119a7558946e113227f45e2735697c4dbe97
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 42
WETH9.constructor confirmed Block: 46 Gas used: 471464 (3.93%)
WETH9 deployed at: 0x0C60536783db9ED5A2B216970B10FF2243d317dD

Transaction sent: 0xaa44c997c6ebd3da100a70a81b108f8e9e10fb0831c682fe1892eee69649ee6e
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 43
UniswapV3Factory.constructor confirmed Block: 47 Gas used: 5421585 (45.18%)
UniswapV3Factory deployed at: 0xe19E87b363DD7a3af5c45C95ab6885367251B94

Transaction sent: 0x7be20cbf1f4f1f911f8f57a59a263200398743f72253003d33ef4fb90b1afa15
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 44
UniswapV3Factory.createPool confirmed Block: 48 Gas used: 4463636 (37.20%)

Transaction sent: 0x6c8509c821cfc3a08cb41a8a25213f812b7f60455e7e14c82d26f9d202a14df5
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 45
SwapRouter.constructor confirmed Block: 49 Gas used: 1965583 (16.38%)
SwapRouter deployed at: 0xa1910C6e0Fbd0E38cfBabAeC5D1C1D539F81CC63

Transaction sent: 0x2e56a11d786dfcf55d19436d612eb045bddb5ad9660a03ccc25404fb304527de
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 46
NFTDescriptor.constructor confirmed Block: 50 Gas used: 4627980 (38.57%)
NFTDescriptor deployed at: 0x8BE16B874F47371C42498b499837Ed87D7661E86

Transaction sent: 0x7120e94b26db913be4d1ebd05349d1d7bfe9d2bbbe02bd53c7f3b5e7c7ef5a69
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 47
NonfungibleTokenPositionDescriptor.constructor confirmed Block: 51 Gas used: 938430 (7.82%)
NonfungibleTokenPositionDescriptor deployed at: 0x1aa96efd2B002541E830CB7f60e473AA24e31F9A

Transaction sent: 0xd53ea25c0c589806dcf0db4073fdfbcc659db1b7cbf272937433a262791ca332
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 48
NonfungiblePositionManager.constructor confirmed Block: 52 Gas used: 4431392 (36.93%)
NonfungiblePositionManager deployed at: 0x8b1B440724DCe2EE9779B58af841Ec59F545838B

Transaction sent: 0x6a3d03f9ed270df6f65fb68e93e3149ccfcd16527bb63b22fd451bdcd847e1ef
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 49
YorpyController.constructor confirmed Block: 53 Gas used: 5069312 (42.24%)
YorpyController deployed at: 0xC6D563d5c2243b27e7294511063f563ED701EA2C

Transaction sent: 0xcf2e2d72d2949cef3918b204043f464103ed8ee5b2dc8c1e86df09c69cd483df
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 3
YorpyController.setAutomator confirmed (unauthorized) Block: 54 Gas used: 24304 (0.20%)

Transaction sent: 0x20e1f5d56c5ca7fcf5afc1fc8d7d3a3b0b9d9db9dc61fbc86154c87aa57c3f48
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 0
YorpyController.setAutomator confirmed (invalidAutomatorAddress) Block: 55 Gas used: 23515 (0.20%)

Transaction sent: 0x8df52866acadc2bd41181982ee2737bb207b9a430a974830ca53b697f84b7681
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 1
YorpyController.setAutomator confirmed Block: 56 Gas used: 31377 (0.26%)

tests/test_yorpy_ctrl.py::test_set_automator PASSED
```

```

tests/test_yorpy_ctrl.py::test_set_configs RUNNING
Transaction sent: 0xc7b74e7084403cad58f42d0618c17f1e072cbfc72719f62c464aabe15246d957
  Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 50
  USDC.constructor confirmed Block: 57 Gas used: 471356 (3.93%)
  USDC deployed at: 0xD537bF4b795b7D07Bd5F4bAf7017e3ce8360B1DE

Transaction sent: 0xac6e0d5f9bb6db214b438230cee2a079b4f548e567a0d25593a7c26653db481f
  Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 51
  WETH9.constructor confirmed Block: 58 Gas used: 471464 (3.93%)
  WETH9 deployed at: 0x70bC6D873D110Da59a9c49E7485a27B0F605E5db

Transaction sent: 0x8e16d3d23e1eef5c7bc445bb374e9726c64e9dff0d6a767cd4cb825ed9075e33
  Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 52
  UniswapV3Factory.constructor confirmed Block: 59 Gas used: 5421585 (45.18%)
  UniswapV3Factory deployed at: 0xFb7C5F938835aE34aF48c278C6763E134907Acdb

Transaction sent: 0xeae825a7f925bddf337b68538f8b6f6ceb1867372bfa65599917407f494aacec
  Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 53
  UniswapV3Factory.createPool confirmed Block: 60 Gas used: 4463636 (37.20%)

Transaction sent: 0x6841d8d39a92d5b28e6ded7f0552af04ed85369546551c047dc2302569c15b8a
  Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 54
  SwapRouter.constructor confirmed Block: 61 Gas used: 1965583 (16.38%)
  SwapRouter deployed at: 0xEfE66132727f3831AB4E020357B5Bf615076Df6A

Transaction sent: 0x3976908e15dcc0fa530d71f1cd45c43c90fc60f7795535815b73534c270eb375
  Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 55
  NFTDescriptor.constructor confirmed Block: 62 Gas used: 4627980 (38.57%)
  NFTDescriptor deployed at: 0xEFDE7eC452f9A203559896F64267809E248D044f

Transaction sent: 0x39ccee3b7e88528bb27dd9cba1e489417fe6647bfc7222bf9ed964caab3528e
  Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 56
  NonfungibleTokenPositionDescriptor.constructor confirmed Block: 63 Gas used: 938430 (7.82%)
  NonfungibleTokenPositionDescriptor deployed at: 0x93F6bA0E6DcB1Ec0F1aBD80Be31e025d6e64Ad97

Transaction sent: 0x1801be3cdb6c3984823c895b404cf1eeff763d1c5c07db85307ebc224a958325
  Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 57
  NonfungiblePositionManager.constructor confirmed Block: 64 Gas used: 4431404 (36.93%)
  NonfungiblePositionManager deployed at: 0x342216ff4b4D6899DDE6535D6E50b6Db71654bc4

Transaction sent: 0x5db85bc4e9a32811550ffaa00c87007b855f1b3ea0dddfcb42609ee2b1085f63c
  Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 58
  YorpyController.constructor confirmed Block: 65 Gas used: 5069312 (42.24%)
  YorpyController deployed at: 0xa5659Fa683b71C907cd346397c694b93aFF40b51

Transaction sent: 0xfe908aac88626cf365befc679d3cedc3b9007f6c4c117cfbc6408ec2b9560099
  Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 0
  YorpyController.setConfigs confirmed (unauthorized) Block: 66 Gas used: 25226 (0.21%)

Transaction sent: 0x221861a844e8bf16991abc68c3a97e47550601ada7752a55fc361997be71c351
  Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 2
  YorpyController.setAutomator confirmed Block: 67 Gas used: 31377 (0.26%)

Transaction sent: 0xale77d5d87091b4cfa530af67c90a6ba3b3824f54336558999f430165633a518
  Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 1
  YorpyController.setConfigs confirmed (invalidUsdcCapacity) Block: 68 Gas used: 26195 (0.22%)

Transaction sent: 0x0f02295f634816cb6bda5433b0c2db41e23c323e0c31d8f3f2320a4f5ddb7e1e
  Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 2
  YorpyController.setConfigs confirmed (invalidLiquiditySlippage) Block: 69 Gas used: 26265 (0.22%)

Transaction sent: 0x1bf819aca84b720e6a02e02c2112bae5a001b8478c39dcc1efa536895576347d
  Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 3
  YorpyController.setConfigs confirmed (invalidSmokeInterval) Block: 70 Gas used: 26240 (0.22%)

Transaction sent: 0xbdd7adc122d6a4b010a32c123e106b98f292aa876d05bd944a388162a586051f
  Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 4
  YorpyController.setConfigs confirmed (invalidSmokeChaosRatio) Block: 71 Gas used: 26318 (0.22%)

Transaction sent: 0x86bb0b6eabbd2274eadb15b50c6e57352d4b091a4637e391fad54e714859f9e
  Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 5
  YorpyController.setConfigs confirmed (invalidSmokeChaosLoop) Block: 72 Gas used: 26417 (0.22%)

```

```
Transaction sent: 0xd15813c7552d2b3db66a363dc932db4099694a31c682a84696e868add1deba0c
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 6
YorpyController.setConfigs confirmed (invalidSmokeFeed) Block: 73 Gas used: 26454 (0.22%)

Transaction sent: 0x7910766074eb70d53b82abfebafa5f0c7c5c0c9a4400dd0d64695a10a1c1b80d
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 7
YorpyController.setConfigs confirmed (invalidSmokeUsdcTarget) Block: 74 Gas used: 26553 (0.22%)

Transaction sent: 0x433ea11a2ede1216c3b3b39386ea090b71fe1ca5046fe6a7254150ed26e493e5
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 8
YorpyController.setConfigs confirmed (invalidSmokeYorpyTarget) Block: 75 Gas used: 26652 (0.22%)

Transaction sent: 0x559198e9beabcea32490f35c1aa4c08d4cb9bd3df5210321da3552cb4d7ce021
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 9
YorpyController.setConfigs confirmed (invalidRageInterval) Block: 76 Gas used: 26676 (0.22%)

Transaction sent: 0x9f66a3f319b1aa856d441f90dfd82bf2a9e9c8460ae2545ec04887f83bbc1fa4
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 10
YorpyController.setConfigs confirmed (invalidRageFeed) Block: 77 Gas used: 26730 (0.22%)

Transaction sent: 0x64e961a98ac3ea9c1530dd378410641aee01ade305b7c6f9ecaec8a433d14b5d
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 11
YorpyController.setConfigs confirmed (invalidRageLiquidityRatio) Block: 78 Gas used: 26885 (0.22%)

Transaction sent: 0xdaa377dbf661e762af20697d7119201355864f67a8987462435bbd39305dbfd2
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 12
YorpyController.setConfigs confirmed Block: 79 Gas used: 32580 (0.27%)

tests/test_yorpy_ctrl.py::test_set_configs PASSED
```



```
tests/test_yorpy_ctrl.py::test_smoke_fees RUNNING
Transaction sent: 0x4a6ce4e4fb47949462ef7f8551b51922b33ecedbaccc7c70f30bf108bce331cf
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 59
USDC.constructor confirmed Block: 80 Gas used: 471356 (3.93%)
USDC deployed at: 0x286677F2b204be093ABee3e35074352b339243B

Transaction sent: 0xb8ceb8401c41dd78c717243fc03ec7ef995a5ff52ee12c7dbec8bd6cc8a87c88
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 60
WETH9.constructor confirmed Block: 81 Gas used: 471464 (3.93%)
WETH9 deployed at: 0xA83Fad7514B39b12C0bAcA71e0A7cc63D2Ff1941

Transaction sent: 0x49c8ee64707a39025357bff5c231fc79b3d0d0ed9fafc2cf662bacba847e9abd
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 61
UniswapV3Factory.constructor confirmed Block: 82 Gas used: 5421585 (45.18%)
UniswapV3Factory deployed at: 0x64B334435888bb5E44D890a7B319981c4Bb4B47d

Transaction sent: 0x615db93a1531d66c4b937de981d8dcbe7da2288b96ec837480b97b737d555216
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 62
UniswapV3Factory.createPool confirmed Block: 83 Gas used: 4463645 (37.20%)

Transaction sent: 0x355a1491781c3dac21b1d4e5cb810a463d6e55e28af0c184dd052c98f536e887
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 63
SwapRouter.constructor confirmed Block: 84 Gas used: 1965583 (16.38%)
SwapRouter deployed at: 0x0764A8da0FCAa127b31E13b79E9a273Fb5B2bF26

Transaction sent: 0xb62ad04acdf7d1087f9abdcc5c7b392dae6ab0f08a6bc85d1db1a60b16f41c44
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 64
NFTDescriptor.constructor confirmed Block: 85 Gas used: 4627980 (38.57%)
NFTDescriptor deployed at: 0x2acC1AbFdC76E48e49c91f55512066B4DD6555Dd

Transaction sent: 0x51f7f84e05a495c33798dfb55d4a18229b33c2f131a2802f6c03a25db6428de7
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 65
NonfungibleTokenPositionDescriptor.constructor confirmed Block: 86 Gas used: 938430 (7.82%)
NonfungibleTokenPositionDescriptor deployed at: 0xFd87ceEa79b211268Fb182a48E43644543c08709

Transaction sent: 0xcdcf138fe13e58bf81d2722b2f43177cbffca9d481de411969e5310c24ed6c652
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 66
NonfungiblePositionManager.constructor confirmed Block: 87 Gas used: 4431404 (36.93%)
NonfungiblePositionManager deployed at: 0x7e4ED6273177126c48503850a526B45bed16E747

Transaction sent: 0x4131bf488d6916795fcce0254a46befc2b70489a77a6c0d020c875fab606dc92
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 67
YorpyController.constructor confirmed Block: 88 Gas used: 5069312 (42.24%)
YorpyController deployed at: 0xA2ea57c9C7ED08D48F5d92Dd774b6Fe55465d86f

Transaction sent: 0xeda7430ee288c0ae1e8301c69b9ee5caa29def944117134824a34d0276109408
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 3
YorpyController.setAutomator confirmed Block: 89 Gas used: 31377 (0.26%)

Transaction sent: 0x55f1e980604ec952487a5d5c5f9e5be83081833722a64cf7cbe3d69e1b1b03c3
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 13
YorpyController.setConfigs confirmed Block: 90 Gas used: 34674 (0.29%)

Transaction sent: 0x13d468bbe1002cc87546a0bbc16218ede08d4a19a701a5c1d1e592fb92f3dc7f
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 4
YorpyController.smokeFees confirmed (unauthorized) Block: 91 Gas used: 29138 (0.24%)

Transaction sent: 0x26041a849c60f58224f0ec21b79b221adce8da3d172b321cb215433a6b5741a0
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 5
YorpyController.setDefaultMode confirmed (UNAUTHORIZED) Block: 92 Gas used: 22277 (0.19%)

Transaction sent: 0x3be70e67040c5e8b073c2676bf34318bc90bb6a9a50953c4fc7ffdea5c2d5eb9
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 68
YorpyController.setDefaultMode confirmed Block: 93 Gas used: 121925 (1.02%)

Transaction sent: 0xb9eb61de7e196743e26dd4b8ab0b82a40a002cd74c9b0c5bd35a0e70c4af9711
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 6
YorpyController.smokeFees confirmed (nftNotSet) Block: 94 Gas used: 29147 (0.24%)

Transaction sent: 0x95bd7a87bf04d9b135cf2adb179c47fcb22eb7e5af810b673e31ea0d5ce4f8d
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 69
UniswapV3Factory.createPool confirmed Block: 95 Gas used: 4463636 (37.20%)
```

```
Transaction sent: 0x907f9398462d20af43f2a4dea12510d22e98ab34507a98da159d91901641643d
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 70
YorpyController.setNft confirmed Block: 96 Gas used: 276085 (2.30%)

Transaction sent: 0x42835c12edaa6dfea7693db3303bbb13b09b0739a33dea75cd3a6aca01dbdc97
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 7
YorpyController.smokeFees confirmed (ERC721: invalid token ID) Block: 97 Gas used: 64935 (0.54%)

Transaction sent: 0x570845f072e0a3a800d7542e64a53affa518c26a995a9cbadafd6ad4a897cbc6
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 71
UniswapV3Liquidity.constructor confirmed Block: 98 Gas used: 728246 (6.07%)
UniswapV3Liquidity deployed at: 0x47a27C9881B5C5eC78c38FBEE7DD0A5eb68633C

Transaction sent: 0x94d6573cb6515f9ca6e0e5fcbe06e2871f9f00009e30f2073d3cb29883adca3c
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 72
USDC.deposit confirmed Block: 99 Gas used: 43769 (0.36%)

Transaction sent: 0xac3487fbdfc30124adf1d4c485bc4a991e1255c8adf1556ea0b8f497a45430cd
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 73
WETH9.deposit confirmed Block: 100 Gas used: 43769 (0.36%)

Transaction sent: 0x8107abfe051e51914ad455ede1705b45ae71a93d7d17c2688f7c491816f19e77
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 74
USDC.approve confirmed Block: 101 Gas used: 44061 (0.37%)

Transaction sent: 0x52009a1dc4153fb284264531307830268a886793b5497e0b847011b556ec90b3
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 75
WETH9.approve confirmed Block: 102 Gas used: 44061 (0.37%)

tests/test_yorpy_ctrl.py::test_smoke_fees PASSED
tests/test_yorpy_ctrl.py::test_yorpy_page RUNNING
```

```
tests/test_yorpy_ctrl.py::test_yorpy_rage RUNNING
Transaction sent: 0x47e9d4423a61f905c66005d0ccc8b5e7f609d0fbec8218d9cb41314b8beb5ff0
  Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 76
  USDC.constructor confirmed Block: 103 Gas used: 471356 (3.93%)
  USDC deployed at: 0x2E51a0DB587eadCF8495B41Bf3FC9f4F706d0028

Transaction sent: 0x86ca9643ed19eabce35a2258332e4b545452cf2ac3bb35130174ff7c9a3a048d
  Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 77
  WETH9.constructor confirmed Block: 104 Gas used: 471464 (3.93%)
  WETH9 deployed at: 0x6057028AEb3086440A01577fcD18C5eC77305c47

Transaction sent: 0xfecf128e0dde825aa8f632f1a59e1fe2daaec147cafa0135ae6945249a14f3d5
  Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 78
  UniswapV3Factory.constructor confirmed Block: 105 Gas used: 5421585 (45.18%)
  UniswapV3Factory deployed at: 0xe25EDE8b52d4DE741Bd61c30060a003f0F1151A5

Transaction sent: 0xe01db76c2e95ad9e0e2b14b649d27c89c56db112c73fd9fae0f39ac3633b2f1a
  Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 79
  UniswapV3Factory.createPool confirmed Block: 106 Gas used: 4463633 (37.20%)

Transaction sent: 0x94f094ee09a025a65ad3432452f8049f9a57b9979c55d604dc7165c80f154008
  Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 80
  SwapRouter.constructor confirmed Block: 107 Gas used: 1965571 (16.38%)
  SwapRouter deployed at: 0xfADA48d21dD3c18FA2511F84Ca81aB3c5Cfd0c9D

Transaction sent: 0x693b0c252421b094a06a714cde2c9dbc64fe9c43c9785fdc5c5f5416203c81ed
  Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 81
  NFTDescriptor.constructor confirmed Block: 108 Gas used: 4627980 (38.57%)
  NFTDescriptor deployed at: 0x741D86951a8b99159be52644e60de7826033Ee44

Transaction sent: 0xefbe49514525ff614f04b7f2034f5dae028291c88316060765aff7f96808e0c1
  Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 82
  NonfungibleTokenPositionDescriptor.constructor confirmed Block: 109 Gas used: 938430 (7.82%)
  NonfungibleTokenPositionDescriptor deployed at: 0x953d9B708E446dcC9257d900C7cFc34Db2969A57

Transaction sent: 0xfc368ec1633160664fae7753cd6e14ec5bb216b930c78ea0b0fa36f3e3ae198e
  Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 83
  NonfungiblePositionManager.constructor confirmed Block: 110 Gas used: 4431380 (36.93%)
  NonfungiblePositionManager deployed at: 0x4f53C468a3AaC1e528C2AB15f18D777D083d642E

Transaction sent: 0x759450dd95451c74ccff3a8b04e9a6aebdeca30f48182837a0a4061176f72ca3
  Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 84
  YorpyController.constructor confirmed Block: 111 Gas used: 5069288 (42.24%)
  YorpyController deployed at: 0x5F589a452BEF32ae54Fbc46968505867cEFbC537

Transaction sent: 0xd67467cb99dc98fe1fdfe1077b5c491dcfa4e3e1ab8bc69499d1adb4532d70e5
  Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 4
  YorpyController.setAutomator confirmed Block: 112 Gas used: 31377 (0.26%)

Transaction sent: 0x268f727f8f3b04759d6ad4c1fb77ec6a304a14132b8be7a4569ccf9918e90e6a
  Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 14
  YorpyController.setConfigs confirmed Block: 113 Gas used: 34674 (0.29%)

Transaction sent: 0x5be5407abb9f756aa6e4cbbcb1ee0878c82b7ddcd52b5f7ffdb92f0e22309d1f63
  Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 8
  YorpyController.smokeFees confirmed (unauthorized) Block: 114 Gas used: 29138 (0.24%)

Transaction sent: 0x0b7895207510bb12293b250daea5c0f65f92b8132842d51ed2739bfe7abc3e33
  Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 9
  YorpyController.setDefaultMode confirmed (UNAUTHORIZED) Block: 115 Gas used: 22277 (0.19%)

Transaction sent: 0xf9ac66d4132c482c9eeaed46df747808c3f5dbef2329585c208b44735a49e6ae
  Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 85
  YorpyController.setDefaultMode confirmed Block: 116 Gas used: 121925 (1.02%)

Transaction sent: 0x77488d92d15f83997ddd97ecbdb49c3d35788a89ac6458c72abc55395c51b37
  Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 10
  YorpyController.yorpyRage confirmed (nftNotSet) Block: 117 Gas used: 29065 (0.24%)

Transaction sent: 0x205efbb9b061a7c79271a382045f75d9e4980192d9e59bde15e7366944ba4bfd
  Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 86
  UniswapV3Factory.createPool confirmed Block: 118 Gas used: 4463624 (37.20%)
```

```
Transaction sent: 0xe6c6c68b670846ca0e66230bdb7be439d785c6d8079a805a395b8d18480af8c
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 87
YorpyController.setNft confirmed Block: 119 Gas used: 276085 (2.30%)

Transaction sent: 0x7b318771711181ff739499c1bc7052d745912170f0c8256a47888749ac8d5d4b
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 11
YorpyController.yorpyRage confirmed (Invalid token ID) Block: 120 Gas used: 64177 (0.53%)

tests/test_yorpy_ctrl.py::test_yorpy_rage PASSED
```

## 5.0 Annexes

Testing code - Token Hestia:

```
from brownie import (
    reverts,
)

from scripts.helpful_scripts import (
    ZERO_ADDRESS,
    DAY_TIMESTAMP,
    get_account,
    get_timestamp,
    get_chain_number,
    increase_timestamp
)

from scripts.deploy import (
    deploy_uniswap_v3_liquidity,
    deploy_usdc,
    deploy_weth,
    deploy_yorpy_controller,
)
```

```

def test_set_nft(only_local):

    # Arrange

    owner = get_account(0)

    other = get_account(1)

    extra = get_account(2)

    usdc = deploy_usdc(owner)

    weth = deploy_weth(owner)

    yorpy_ctrl, factory = deploy_yorpy_controller(owner, weth.address,
    usdc.address)

    with reverts("UNAUTHORIZED"):

        yorpy_ctrl.setNft(0, {"from": other})

    with reverts("invalidNftId"):

        yorpy_ctrl.setNft(0, {"from": owner})

    with reverts("invalidPoolAddress"):

        yorpy_ctrl.setNft(1, {"from": owner})

    yorpy = "0x3b86220b318447A13d02cacd6301a3f7AD2D89C6"

    factory.createPool(usdc.address, yorpy, 10000)

    tx = yorpy_ctrl.setNft(1, {"from": owner})

    assert tx.events['SetNft'][0]['nftId'] == 1

```

```

def test_lock_nft(only_local):

    # Arrange

    owner = get_account(0)

    other = get_account(1)

    extra = get_account(2)

    usdc = deploy_usdc(owner)

    weth = deploy_weth(owner)

    yorpy_ctrl, factory = deploy_yorpy_controller(owner, weth.address,
usdc.address)

    with reverts("UNAUTHORIZED"):

        yorpy_ctrl.lockNFT({"from": other})

    with reverts("nftNotSet"):

        yorpy_ctrl.lockNFT({"from": owner})

    yorpy = "0x500FA5Fd82f3e7A01f624457Ac35EE496Cb3C8a9"

    factory.createPool(usdc.address, yorpy, 10000)

    yorpy_ctrl.setNft(1, {"from": owner})

    with reverts("ERC721: invalid token ID"):

        yorpy_ctrl.lockNFT({"from": owner})

def test_set_usdc_weth_pool(only_local):

```

```

# Arrange

owner = get_account(0)

other = get_account(1)

extra = get_account(2)

usdc = deploy_usdc(owner)

weth = deploy_weth(owner)

yorpy_ctrl, factory = deploy_yorpy_controller(owner, weth.address,
usdc.address)

with reverts("UNAUTHORIZED"):

    yorpy_ctrl.setUsdcWethPool(ZERO_ADDRESS, {"from": other})

with reverts("invalidPoolAddress"):

    yorpy_ctrl.setUsdcWethPool(ZERO_ADDRESS, {"from": owner})

new_usdc = deploy_usdc(owner)

new_weth = deploy_weth(owner)

tx = factory.createPool(new_usdc.address, new_weth.address, 500)

pool_addr = tx.events['PoolCreated'][0]['pool']

with reverts("invalidPoolTokens"):

    yorpy_ctrl.setUsdcWethPool(pool_addr, {"from": owner})

pool = factory.getPool(usdc.address, weth.address, 500)

```



```

tx = yorpy_ctrl.setUsdcWethPool(pool, {"from": owner})

assert tx.events['SetUsdcWethPool'][0]['pool'] == pool

def test_set_automator(only_local):

    # Arrange

    owner = get_account(0)

    other = get_account(1)

    extra = get_account(2)

    automator = "0xc4f4f8a1150fDc8B9b8d4827411f966f59Dc64102"

    usdc = deploy_usdc(owner)

    weth = deploy_weth(owner)

    yorpy_ctrl, factory = deploy_yorpy_controller(owner, weth.address,
    usdc.address)

    with reverts("unauthorized"):

        yorpy_ctrl.setAutomator(ZERO_ADDRESS, {"from": other})

    with reverts("invalidAutomatorAddress"):

        yorpy_ctrl.setAutomator(ZERO_ADDRESS, {"from": automator})

    tx = yorpy_ctrl.setAutomator(extra, {"from": automator})

    assert tx.events['SetAutomator'][0]['automator'] == extra

def test_set_configs(only_local):

    # Arrange

```

```

owner = get_account(0)

other = get_account(1)

extra = get_account(2)

automator = "0xcf4f8a1150fDc8B9b8d4827411f966f59Dc64102"

usdc = deploy_usdc(owner)

weth = deploy_weth(owner)

yorpy_ctrl, factory = deploy_yorpy_controller(owner, weth.address,
usdc.address)

with reverts("unauthorized"):

    yorpy_ctrl.setConfigs(

        6000e6, 0, True, 3600,

        1, 3, 0, 0, 0, True, 3600 * 24, 3, 250,

        {"from": extra})

yorpy_ctrl.setAutomator(extra, {"from": automator})

with reverts("invalidUsdcCapacity"):

    yorpy_ctrl.setConfigs(

        20000e6, 0, True, 3600,

        1, 3, 0, 0, 0, True, 3600 * 24, 3, 250,

        {"from": extra})

with reverts("invalidLiquiditySlippage"):

    yorpy_ctrl.setConfigs(

        10000, 25, True, 3600,

```

```

        1, 3, 0, 0, 0, True, 3600 * 24, 3, 250,
        {"from": extra})
with reverts("invalidSmokeInterval"):
    yorpy_ctrl.setConfigs(
        10000, 0, True, 0,
        1, 3, 0, 0, 0, True, 3600 * 24, 3, 250,
        {"from": extra})
with reverts("invalidSmokeChaosRatio"):
    yorpy_ctrl.setConfigs(
        10000, 0, True, 3600,
        110, 3, 0, 0, 0, True, 3600 * 24, 3, 250,
        {"from": extra})
with reverts("invalidSmokeChaosLoop"):
    yorpy_ctrl.setConfigs(
        10000, 0, True, 3600,
        1, 6, 0, 0, 0, True, 3600 * 24, 3, 250,
        {"from": extra})
with reverts("invalidSmokeFeed"):
    yorpy_ctrl.setConfigs(
        10000, 0, True, 3600,
        1, 3, 200, 0, 0, True, 3600 * 24, 3, 250,
        {"from": extra})
with reverts("invalidSmokeUsdcTarget"):
    yorpy_ctrl.setConfigs(

```

```

        10000, 0, True, 3600,

        1, 3, 0, 4, 0, True, 3600 * 24, 3, 250,

        {"from": extra})

with reverts("invalidSmokeYorpyTarget"):

    yorpy_ctrl.setConfigs(

        10000, 0, True, 3600,

        1, 3, 0, 0, 5, True, 3600 * 24, 3, 250,

        {"from": extra})

with reverts("invalidRageInterval"):

    yorpy_ctrl.setConfigs(

        10000, 0, True, 3600,

        1, 3, 0, 0, 0, True, 3600, 3, 250,

        {"from": extra})

with reverts("invalidRageFeed"):

    yorpy_ctrl.setConfigs(

        10000, 0, True, 3600,

        1, 3, 0, 0, 0, True, 3600 * 12, 200, 250,

        {"from": extra})

with reverts("invalidRageLiquidityRatio"):

    yorpy_ctrl.setConfigs(

        10000, 0, True, 3600,

        1, 3, 0, 0, 0, True, 3600 * 12, 0, 15000,

        {"from": extra})

tx = yorpy_ctrl.setConfigs(

```

```

        10000, 0, True, 3600,

        1, 3, 0, 0, 0, True, 3600 * 12, 0, 0,

        {"from": extra})

    assert tx.events['ConfigChanged'][0]['usdcCapacity'] == 10000

    assert tx.events['ConfigChanged'][0]['liquiditySlippage'] == 0

def test_smoke_fees(only_local):

    # Arrange

    owner = get_account(0)

    other = get_account(1)

    extra = get_account(2)

    automator = "0xcf4f8a1150fDc8B9b8d4827411f966f59Dc64102"

    usdc = deploy_usdc(owner)

    weth = deploy_weth(owner)

    yorpy_ctrl, factory = deploy_yorpy_controller(owner, weth.address,
    usdc.address)

    # Set a new automator

    yorpy_ctrl.setAutomator(extra, {"from": automator})

    # Set smoke public to false

    yorpy_ctrl.setConfigs(

        10000, 0, False, 3600,

        1, 3, 0, 0, 0, True, 3600 * 12, 0, 0,

```

```

        {"from": extra})

with reverts("unauthorized"):

    yorpy_ctrl.smokeFees({"from": other})

with reverts("UNAUTHORIZED"):

    yorpy_ctrl.setDefaultMode({"from": other})

# set smoke public to true

yorpy_ctrl.setDefaultMode({"from": owner})

with reverts("nftNotSet"):

    yorpy_ctrl.smokeFees({"from": other})

# set the nft

yorpy = "0x58B46E930C11294E8e93b491e2F39a781172E37A"

factory.createPool(usdc.address, yorpy, 10000)

yorpy_ctrl.setNft(1, {"from": owner})

with reverts("ERC721: invalid token ID"):

    yorpy_ctrl.smokeFees({"from": other})

position_manager = yorpy_ctrl.POSITION_MANAGER()

uniswap_liq = deploy_uniswap_v3_liquidity(owner, weth.address, usdc.address,
position_manager)

usdc.deposit({"from": owner, "value": 10e18})

weth.deposit({"from": owner, "value": 10e18})

```

```

usdc.approve(uniswap_liq.address, 100e18, {"from": owner})

weth.approve(uniswap_liq.address, 100e18, {"from": owner})

def test_yorpy_rage(only_local):

    # Arrange

    owner = get_account(0)

    other = get_account(1)

    extra = get_account(2)

    automator = "0xc4f8a1150fDc8B9b8d4827411f966f59Dc64102"

    usdc = deploy_usdc(owner)

    weth = deploy_weth(owner)

    yorpy_ctrl, factory = deploy_yorpy_controller(owner, weth.address,
usdc.address)

    # Set a new automator

    yorpy_ctrl.setAutomator(extra, {"from": automator})

    # Set smoke public to false

    yorpy_ctrl.setConfigs(

        10000, 0, False, 3600,

        1, 3, 0, 0, 0, True, 3600 * 12, 0, 0,

        {"from": extra})

    with reverts("unauthorized"):

        yorpy_ctrl.smokeFees({"from": other})

```

```
with reverts("UNAUTHORIZED"):
    yorpy_ctrl.setDefaultMode({"from": other})

# set smoke public to true
yorpy_ctrl.setDefaultMode({"from": owner})

with reverts("nftNotSet"):
    yorpy_ctrl.yorpyRage({"from": other})

# set the nft
yorpy = "0xCdA4219336Af610251f1Ff3fEC9F83954BCA7A57"
factory.createPool(usdc.address, yorpy, 10000)
yorpy_ctrl.setNft(1, {"from": owner})

with reverts("Invalid token ID"):
    yorpy_ctrl.yorpyRage({"from": other})
```



# 6.0 Summary of the audit

During the audit, one high vulnerability and two medium vulnerabilities were identified and addressed in the specified commits.

Vulnerability Level	Total	Pending	Not Apply	Acknowledged	Resolved
High	1				1
Medium	2				2
Low	0				
Informational	1			1	