

Assure DeFi[®]

THE VERIFICATION **GOLD STANDARD**



Security Assessment

Gnome Land

Date: 09/02/2024

Audit Status: PASS

Audit Edition: Advanced



ASSURE DEFI[®]
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Risk Analysis

Vulnerability summary

Classification	Description
 High	High-level vulnerabilities can result in the loss of assets or manipulation of data.
 Medium	Medium-level vulnerabilities can be challenging to exploit, but they still have a considerable impact on smart contract execution, such as allowing public access to critical functions.
 Low	Low-level vulnerabilities are primarily associated with outdated or unused code snippets that generally do not significantly impact execution, sometimes they can be ignored.
 Informational	Informational vulnerabilities, code style violations, and informational statements do not affect smart contract execution and can typically be disregarded.

Executive Summary

According to the Assure assessment, the Customer's smart contract is **Secured**



Scope

Target Code And Revision

For this audit, we performed research, investigation, and review of the Gnome Land contracts followed by issue reporting, along with mitigation and remediation instructions outlined in this report.

Target Code And Revision

Project	Assure
Language	Solidity
Codebase	Commit: ed718791fc497dcf26743cf0592585d4f2ea4596 Gnome.sol - https://github.com/Gnome0xLand/GnomeLandContracts/blob/main/Contracts/Gnome.sol GnomeFactory.sol - https://github.com/Gnome0xLand/GnomeLandContracts/blob/main/Contracts/GnomeFactory.s ol GnomeNFT - https://github.com/Gnome0xLand/GnomeLandContracts/blob/main/Contracts/GnomesNFT.sol
Audit Methodology	Static, Manual

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.

Category	Item
Code review & Functional Review	<ul style="list-style-type: none">• Compiler warnings.• Race conditions and Reentrancy. Cross-function race conditions.• Possible delays in data delivery.• Oracle calls.• Front running.• Timestamp dependence.• Integer Overflow and Underflow.• DoS with Revert.• DoS with block gas limit.• Methods execution permissions.• Economy model.• Private user data leaks.• Malicious Event log.• Scoping and Declarations.• Uninitialized storage pointers.• Arithmetic accuracy.• Design Logic.• Cross-function race conditions.• Safe Zeppelin module.• Fallback function security.• Overpowered functions / Owner privileges

AUDIT OVERVIEW



No high severity issues were found.



No medium severity issues were found.



1. Zero address Validation Missing

Contract: GnomeFactory

Functions: setMiContracts(), setPool()

Issue: During the audit we detected that multiple variables can be set to 0 address leading to potentially lost funds or unintended behaviors.

Fix: Implement checks to validate that the address is not the zero address (0x0) in the affected functions/contracts.

2. Authorizing State Modification for mintReferral Variable

Contract: GnomeFactory

Functions: mintGnomeReferral()

Issue: The mintReferral boolean variable lacks a setter function for altering its state by an authorized entity when msg.sender is unauthorized.

Fix: Implement a setter function to enable authorized modification of the mintReferral boolean by the authorized party.



No informational issues were found.

Testing coverage

During the testing phase, custom use cases were written to cover all the logic of contracts. *Check “Annexes” to see the testing code.

Gnome:

```
tests/test_gnome.py::test_bridge RUNNING
Transaction sent: 0x094c810bd8a6288b9d18a0a289986fad71f1edf3da8912c7155bff4d9012e48f
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 0
LZEndpointMock.constructor confirmed Block: 1 Gas used: 2388416 (19.90%)
LZEndpointMock deployed at: 0x3194c8DC3dbcd3E11a07892e7bA5c3394048Cc87

Transaction sent: 0xd2cf4e0edc223d0593d534db07c4933725668b86a26d007b80708c68168b25bc
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 1
GnomeLand.constructor confirmed Block: 2 Gas used: 3282166 (27.35%)
GnomeLand deployed at: 0x602C71e4D4C47a042Ee7f46E0aee17F94A3bA086

Transaction sent: 0xfa230ac3bc36b4c9ca3311420036f6430a115666e29f34bfea2e481b549aa5fd
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 0
GnomeLand.bridge confirmed (Maximum allowed bridge exceeded) Block: 3 Gas used: 24248 (0.20%)

Transaction sent: 0x62967cef32fd7692eb9d1cdf77daf05beb87ae191154e749503794da1386fcc4
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 1
GnomeLand.bridge confirmed (Caller is not the authorized to bridge) Block: 4 Gas used: 26054 (0.22%)

Transaction sent: 0x32298481cf85538ed852679b50667a39bf748c94bad300078c532d902ed0fd8e
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 2
GnomeLand.setChainId confirmed Block: 5 Gas used: 44709 (0.37%)

Transaction sent: 0x2b29a4447bea17a90d97209597f33c823962a131079f03131363fee7f6175db1
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 3
GnomeLand.bridge confirmed (LzApp: destination chain is not a trusted source) Block: 6 Gas used: 44456 (0.37%)

Transaction sent: 0x251522a4c50514082111cbdd0faca57e4d0eec30a62f7838b29c10c758a5fd7c
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 4
GnomeLand.trustAddress confirmed Block: 7 Gas used: 86361 (0.72%)

Transaction sent: 0x64d8610bb46120d7fe6be16c71d8e7e1bc3930b1834b175e11a9dcf722af0546
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 5
GnomeLand.setTrustedRemoteAddress confirmed Block: 8 Gas used: 42896 (0.36%)

Transaction sent: 0xe9933ff956c2d20381459e00f33473c65d54c6cc850cc8d6b23adf755bf00d33
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 6
GnomeLand.bridge confirmed (LayerZeroMock: incorrect remote address size) Block: 9 Gas used: 57677 (0.48%)

tests/test_gnome.py::test_bridge PASSED
tests/test_gnome.py::test_max_wallet RUNNING
Transaction sent: 0x13670468b228427247aeb26cab5dea22a293176ee74982f2caae335b4aa2d9
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 7
LZEndpointMock.constructor confirmed Block: 10 Gas used: 2388416 (19.90%)
LZEndpointMock deployed at: 0xcCB53c9429d32594F404d01fBe9E65ED1DCda8D9

Transaction sent: 0x4f82ae690aa895299d13f0adfe2fa16c99a3980b5045c403f6ae1ff0c431ce71
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 8
GnomeLand.constructor confirmed Block: 11 Gas used: 3282166 (27.35%)
GnomeLand deployed at: 0x420b1099B9eF5baba6D92029594eF45E19A04A4A
```

```
Transaction sent: 0x35b0fe0b83947de48434974bde04a20ec7ff137e9b31bfd9f7e1c9603e1364bcd
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 2
GnomeLand.setMaxWallet confirmed (Caller is not the authorized) Block: 12 Gas used: 23876 (0.20%)

Transaction sent: 0xe6c2db482fc75654baaf54c6436d21b2522b207237127229494234392123f3a8
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 9
GnomeLand.setMaxWallet confirmed (New max wallet size must be greater than current size) Block: 13 Gas used: 23765 (0.20%)

Transaction sent: 0xbffff583781a20d97521582ec685c856402d0588cbefb6fd555953c02e9c4ae1
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 10
GnomeLand.setMaxWallet confirmed Block: 14 Gas used: 28728 (0.24%)

tests/test_gnome.py::test_max_wallet PASSED
tests/test_gnome.py::test_increase_max_trade_amount RUNNING
Transaction sent: 0x5b07c49dd5fa80e46c61c46d079732b1348e76677cba6e8725f62dcd223efa21
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 11
LZEndpointMock.constructor confirmed Block: 15 Gas used: 2388416 (19.90%)
LZEndpointMock deployed at: 0x7a3d735ee6873f170bdcab1d51B604928dc10d92

Transaction sent: 0x953995fd052c212228fe8f79c8f69113fe69aa03dd25316c58ba3d72babd1537
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 12
GnomeLand.constructor confirmed Block: 16 Gas used: 3282166 (27.35%)
GnomeLand deployed at: 0x2c15A3156108fa5248E4CbCbD693320e9D08E03Cc

Transaction sent: 0x44aab88af25115824976b3d629c68c6253b8cb9b0cba590fce8b2e31cd00a991
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 3
GnomeLand.increaseMaxSellAmount confirmed (Caller is not the authorized) Block: 17 Gas used: 23844 (0.20%)

Transaction sent: 0xcee0f7a82f10374e9f5a120a91786e680c63846d978203ed343b27939d067d32
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 13
GnomeLand.increaseMaxSellAmount confirmed (Cannot decrease max trade amount) Block: 18 Gas used: 23724 (0.20%)

Transaction sent: 0x3ac7ef1ec621859c43724ec5cfc960512dc6f631a6918cc010159f9b776a34f0
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 14
GnomeLand.increaseMaxSellAmount confirmed Block: 19 Gas used: 28723 (0.24%)

tests/test_gnome.py::test_increase_max_trade_amount PASSED
tests/test_gnome.py::test_set_bridge_fee RUNNING
Transaction sent: 0x0e0c1ac60c4c595201e322d3b238ad4d4ff52c44e2404a20bb444a27fcb17e23
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 15
LZEndpointMock.constructor confirmed Block: 20 Gas used: 2388416 (19.90%)
LZEndpointMock deployed at: 0x303758532345801c88c2AD12541b09E9Aa53A93d

Transaction sent: 0x9b4fe8a213716c6250f53ee0f4b1686184f657100e9841d48bf722740e088b92
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 16
GnomeLand.constructor confirmed Block: 21 Gas used: 3282166 (27.35%)
GnomeLand deployed at: 0x26f153358B1C6a4C08660eDd694a0555A9F1cce3

Transaction sent: 0xce160a2090a6b5289fdd4b7f6c58e4bc95243a3a4dc45db0f31eab21c9ela9cc
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 4
GnomeLand.setBridgeFee confirmed (Caller is not the authorized) Block: 22 Gas used: 24090 (0.20%)

Transaction sent: 0x35ecd2377a9b1aae39222a0c9a41db24829cee96354aba97d9a8a1590634ffe4
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 17
GnomeLand.setBridgeFee confirmed (Bridge Fee can't be bigger than 10%) Block: 23 Gas used: 23260 (0.19%)
```



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Transaction sent: 0x8601ef05873913cf01793775e7da2831367e2bd92bc6a9cf807d86f663b718c8
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 18
GnomeLand.setBridgeFee confirmed Block: 24 Gas used: 28139 (0.23%)

tests/test_gnome.py::test_set_bridge_fee PASSED
tests/test_gnome.py::test_transfer RUNNING
Transaction sent: 0x80ad0e33b95ab742a1381eb51b1a9d836ce56747d99bae781014f2fbc1c7870a
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 19
LZEndpointMock.constructor confirmed Block: 25 Gas used: 2388416 (19.90%)
LZEndpointMock deployed at: 0xDae02e4fE488952cFB8c95177154D188647a0146

Transaction sent: 0xca9ef12e7f714d3c70e75b4f6f13888769354b14bda75a0cdb043acc7622c285
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 20
GnomeLand.constructor confirmed Block: 26 Gas used: 3282166 (27.35%)
GnomeLand deployed at: 0xdCF93F11ef216cEC9C07fd31dD801c9b2b39Afb4

Transaction sent: 0xb72e51f793c41b887628818ed4213e7c4bd3009351de9a497abb65ed24370910
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 21
GnomeLand.transfer confirmed Block: 27 Gas used: 53834 (0.45%)

Transaction sent: 0x25d6ba9daf115eba6aeceaa71e7090c7d4a7b50cc6cb9422b88588605bc61aae
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 22
GnomeLand.transfer confirmed Block: 28 Gas used: 53822 (0.45%)

Transaction sent: 0x8ac2ba91091f2539f0b49e6472db829c539a707e84c4729ee9614cfce15d00b2
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 5
GnomeLand.transfer confirmed (Trade Not Opened) Block: 29 Gas used: 25765 (0.21%)

Transaction sent: 0xc1feecc99d7becb1b523bf0229d2e7912d30e0d543f724b0a5451efed970d543
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 23
GnomeLand.openTrade confirmed Block: 30 Gas used: 29386 (0.24%)

Transaction sent: 0x294b412671b8b02958a2e5d5781805e62a342b9576affab4a9f9bad26956a6b6
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 6
GnomeLand.transfer confirmed Block: 31 Gas used: 43246 (0.36%)

tests/test_gnome.py::test_transfer PASSED

```

Gnome factory:

tests/test_gnome_factory.py::test_mint_gnome **RUNNING**

Transaction sent: **0xd2900bf5714f3401c651cb2daac884b44c6205adb2d3c229e8c7a82909fbf10b**
Gas price: **0.0** gwei Gas limit: **12000000** Nonce: **0**
Gnomes.constructor confirmed Block: **1** Gas used: **1862414** (15.52%)
Gnomes deployed at: **0x3194c8DC3dbcd3E11a07892e7bA5c3394048Cc87**

Transaction sent: **0xe5969169094b3e9a932aabb871440917e8080bbc50f436619bf2ddfa3c4738d**
Gas price: **0.0** gwei Gas limit: **12000000** Nonce: **1**
LZEndpointMock.constructor confirmed Block: **2** Gas used: **2388416** (19.90%)
LZEndpointMock deployed at: **0x602C71e4DAC47a042Ee7f46E0aee17F94A3bA0B6**

Transaction sent: **0xbaa529a2f934f75ab8ec414fe1af32bdc76b00ec9907de37618d005f3267eaf0**
Gas price: **0.0** gwei Gas limit: **12000000** Nonce: **2**
GnomeLand.constructor confirmed Block: **3** Gas used: **3282166** (27.35%)
GnomeLand deployed at: **0xE7eD6747FaC5360f88a2EFC03E00d25789F69291**

Transaction sent: **0x18dad6db24d792c68c7eb02a278f4f155e0dbb2fa9305abf071bef7575b5224e**
Gas price: **0.0** gwei Gas limit: **12000000** Nonce: **3**
GnomeReferrals.constructor confirmed Block: **4** Gas used: **1686505** (14.05%)
GnomeReferrals deployed at: **0x6951b58d815043E3F842c1b026b0Fa888Cc2DD85**

Transaction sent: **0x4afb4cbec57a6aff9062d8730cb5eff7f1e478ee817ce5f3e3609fa3c8e66e5d**
Gas price: **0.0** gwei Gas limit: **12000000** Nonce: **4**
WETH9.constructor confirmed Block: **5** Gas used: **471464** (3.93%)
WETH9 deployed at: **0xe0aA552A10d7EC8760Fc6c246D391E698a82dDf9**

Transaction sent: **0xadd225559e62b8dd509240b8b11ff92c77409650352856f0ad23da8dd8563c08**
Gas price: **0.0** gwei Gas limit: **12000000** Nonce: **5**
UniswapV3Factory.constructor confirmed Block: **6** Gas used: **5421585** (45.18%)
UniswapV3Factory deployed at: **0x6b48De1086912A6Cb24ce3d843b3466e6c72AFd3**

Transaction sent: **0x5c66461f09b6d0b621c7e59a830143cee35e2cc1109e5f17bb781f189ea4a782**
Gas price: **0.0** gwei Gas limit: **12000000** Nonce: **6**
SwapRouter.constructor confirmed Block: **7** Gas used: **1965571** (16.38%)
SwapRouter deployed at: **0x9E4c14403d7d9A8A782044E86a93CAE09D7B2ac9**

Transaction sent: **0xe33b2b41cab171837cae3bc8c72ffadfdf62cfcece92ad472da24b4f637dcb60**
Gas price: **0.0** gwei Gas limit: **12000000** Nonce: **7**
NFTDescriptor.constructor confirmed Block: **8** Gas used: **4629900** (38.58%)
NFTDescriptor deployed at: **0xcCB53c9429d32594F404d01fbe9E65ED1DCda8D9**

Transaction sent: **0x2f30a28a05309e9f8a2ccf3a33f9b1821361138074e9fd5d3d6b379f79d059d8**
Gas price: **0.0** gwei Gas limit: **12000000** Nonce: **8**
NonfungibleTokenPositionDescriptor.constructor confirmed Block: **9** Gas used: **938430** (7.82%)
NonfungibleTokenPositionDescriptor deployed at: **0x420b1099B9eF5baba6D92029594eF45E19A04A4A**

Transaction sent: **0x81e28bd0867f876b2c08a133694f09c4e9b03735c3f4d59b24e085c0241a2f3d**
Gas price: **0.0** gwei Gas limit: **12000000** Nonce: **9**
NonfungiblePositionManager.constructor confirmed Block: **10** Gas used: **4431404** (36.93%)
NonfungiblePositionManager deployed at: **0xa3853d0Cd2E3fC28e8E130288F2aBD8d5EE37472**

Transaction sent: **0x0ab3cb1c99f54d9c5c165eb354719edb7cab8706d77703103b7c3f486c17558d**
Gas price: **0.0** gwei Gas limit: **12000000** Nonce: **10**
NonfungiblePositionManager.createAndInitializePoolIfNecessary confirmed Block: **11** Gas used: **4520356** (37.67%)

Transaction sent: **0x41161243d7783930c4639a009a92373a1872be4142ab0991f99672ce10a6f472**
Gas price: **0.0** gwei Gas limit: **12000000** Nonce: **11**
UniswapV3Liquidity.constructor confirmed Block: **12** Gas used: **801247** (6.68%)
UniswapV3Liquidity deployed at: **0x7a3d735ee6873f17Dbdcab1d51B604928dc10d92**

Transaction sent: **0x9edb0a0002019696c5674ce0c3db66598e3c16c677434a9c52ec96f6a097006d**
Gas price: **0.0** gwei Gas limit: **12000000** Nonce: **12**
GnomeFactory.constructor confirmed Block: **13** Gas used: **4877347** (40.64%)
GnomeFactory deployed at: **0x2c15A3156108fa5248E4CbCbd693320e9D8E03Cc**

Transaction sent: **0xec912dd07dd3167e0f251f6736a0bf3f596891c942e10f52ed8e791dc6debcd4**
Gas price: **0.0** gwei Gas limit: **12000000** Nonce: **0**
GnomeFactory.mintGnome confirmed **(Not Enough to mint Gnome)** Block: **14** Gas used: **22858** (0.19%)

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Transaction sent: 0x59769808910d25b4c37041d1598354164c0710de078c012414f228f4cc7f272e
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 1
GnomeFactory.mintGnome confirmed (Minting Not Opened to Public) Block: 15 Gas used: 24600 (0.21%)

Transaction sent: 0x76a53057ea50333aa40906029808066608ce110d299dcb8dd00beaed1c75fdeb
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 13
GnomeFactory.openMint confirmed Block: 16 Gas used: 43632 (0.36%)

Transaction sent: 0xf2e36f33a1457f4c8fd91e3c6ae9a9e037e6cf29947f6992d487c497a2df01ef
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 14
WETH9.deposit confirmed Block: 17 Gas used: 43769 (0.36%)

Transaction sent: 0xf8676c896c58ba30dc131488ef58f8eba3d2ad28eb1d0f9b2035d56fb5d5f7ed
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 15
WETH9.approve confirmed Block: 18 Gas used: 44061 (0.37%)

Transaction sent: 0x60c579a113f01551141b8aaae35c27766ffbbd89d880777ef8f512d433d88db0
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 16
GnomeLand.approve confirmed Block: 19 Gas used: 44040 (0.37%)

Transaction sent: 0xb4e2b8c95a50bf0d1a7c0fa54f9f972dc5b9b3447ac8fda6f7ac3e1e445360da
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 2
GnomeFactory.mintGnome confirmed (reverted) Block: 20 Gas used: 118698 (0.99%)

tests/test_gnome_factory.py::test_mint_gnome PASSED
tests/test_gnome_factory.py::test_mint_gnome_referral RUNNING
Transaction sent: 0xbdbd1e0858e7b6a494ade99b56aadf0ec6b7a052245d460a782bdd06ee58afedd
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 17
Gnomes.constructor confirmed Block: 21 Gas used: 1862414 (15.52%)
Gnomes deployed at: 0xFbD588c72B438faD4Cf7cD879c8F730Faa213Ba0

Transaction sent: 0x94371f89472d1023b404695d658c2e96699880a5264d4fb1b791a446c50992f5
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 18
LZEndpointMock.constructor confirmed Block: 22 Gas used: 2388416 (19.90%)
LZEndpointMock deployed at: 0xed00238F9A0F7b4d93842033cdF56cCB32C781c2

Transaction sent: 0xf179af22c9567f48174ef6e8c82842cf3ea183d707316d827ce94107d5b43f87
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 19
GnomeLand.constructor confirmed Block: 23 Gas used: 3282154 (27.35%)
GnomeLand deployed at: 0xDae02e4fE488952cF88c95177154D188647a0146

Transaction sent: 0x0bfcc1b46b9f6adb93f61c7c15e3993035406febe194b2bc3f6e3dd1068865be
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 20
GnomeReferrals.constructor confirmed Block: 24 Gas used: 1686517 (14.05%)
GnomeReferrals deployed at: 0xdCF93F11ef216cEC9C07fd31d801c9b2b39Afb4

Transaction sent: 0x12cb266aff305a0cbcd00e42da9ee4e2b042317229e34b7ba9ae54a98e32ec9
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 21
WETH9.constructor confirmed Block: 25 Gas used: 471464 (3.93%)
WETH9 deployed at: 0xBcb61491F1859f53438918F1A5aFCA542Af9D397

Transaction sent: 0x63fe97e62b8647f3922d914831476b4f85eb00f7c8f2813c91a3bbf3e98370bf
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 22
UniswapV3Factory.constructor confirmed Block: 26 Gas used: 5421585 (45.18%)
UniswapV3Factory deployed at: 0xD22363efee93190f82b52FCD62B7Dbcb920eF658

Transaction sent: 0x5872ae45d9e8c873e1b54586a3d398b2af41bfb6a44a2825020c36233d583449
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 23
SwapRouter.constructor confirmed Block: 27 Gas used: 1965571 (16.38%)
SwapRouter deployed at: 0x4D1B781ce59B8C184F63B99D39d6719A522f4685

Transaction sent: 0xac55d0c17b1198c0ee8b9cad1ece9bf64489e9cd22ec372a666acabbf14ecb87
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 24
NFTDescriptor.constructor confirmed Block: 28 Gas used: 4629900 (38.58%)
NFTDescriptor deployed at: 0xf9C8Cf55f2E520B08d869df7bc76aa3d3dd0F913
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Transaction sent: 0xc48c86ec21f06fb808b1a6c1a7b37291864cbfa369b5da445cc8265ffde655ad
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 26
NonfungiblePositionManager.constructor confirmed Block: 30 Gas used: 4431404 (36.93%)
NonfungiblePositionManager deployed at: 0xADEd61D42dE86f9058386D1D0d739d20C7eAfc43

Transaction sent: 0xd2bc876cdc12510a4eba5a8945b78a5eed681586676bff82c7e026192f12957e
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 27
NonfungiblePositionManager.createAndInitializePoolIfNecessary confirmed Block: 31 Gas used: 4520368 (37.67%)

Transaction sent: 0xfa38efb8a5af5fd609fdb3663e4ce65a42030c6b0da70249a9a0d21d52cfed9d
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 28
UniswapV3Liquidity.constructor confirmed Block: 32 Gas used: 801259 (6.68%)
UniswapV3Liquidity deployed at: 0xA95916C3D979400C7443961330b3092510a2298a

Transaction sent: 0x36ffee5b8132f2fe7e70c3869986bfd7509ba53c6aec42178623ea26913ec992
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 29
GnomeFactory.constructor confirmed Block: 33 Gas used: 4877359 (40.64%)
GnomeFactory deployed at: 0x42E8D004c84E6B5Bad559D3b5CE7947AADb9E0bc

Transaction sent: 0x427253e61beb90c8f2cd187cf81e2206f126c091a4e7bc827bede3902e7cfe1c
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 3
GnomeFactory.mintGnomeReferral confirmed (Not Enough to mint Gnome) Block: 34 Gas used: 24382 (0.20%)

Transaction sent: 0x6c4a3cb430cd98a36fb44ade0ac40d3a4fb9dfac96e9c7caa010e19370f8ba21
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 4
GnomeFactory.mintGnomeReferral confirmed (Minting Not Opened to Referrals) Block: 35 Gas used: 26115 (0.22%)

Transaction sent: 0x6df5a0b1884c98e776be7adf65cd8949716cb61a2f6baddb823143244150d518
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 30
GnomeFactory.mintGnomeReferral confirmed (Caller is not the authorized) Block: 36 Gas used: 31760 (0.26%)

Transaction sent: 0x6f94a6c78c12d78bd7ca3d11224912b07284f78a940e97c4ee992a0309f01188
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 31
GnomeReferrals.setIsAuth confirmed Block: 37 Gas used: 43789 (0.36%)

Transaction sent: 0xf4d8c9217fb1521d20045da04fa060346ebf7967973b95f0afe59b22700c4695
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 32
GnomeFactory.mintGnomeReferral confirmed (Invalid referral code) Block: 38 Gas used: 34779 (0.29%)

tests/test_gnome_factory.py::test_mint_gnome_referral PASSED
tests/test_gnome_factory.py::test_mint_gnome_from_gnome RUNNING
Transaction sent: 0xebc28e88190ea7fa6b64d95233a98c11d00b4017bd8e32fb064247d65b590fbf
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 33
Gnomes.constructor confirmed Block: 39 Gas used: 1862414 (15.52%)
Gnomes deployed at: 0x34b97ffa01dc0DC959c5f1176273D0de3be914C1

Transaction sent: 0xcdelbf5ae1cc434752f6026e2d8381ed8c2f76687856851e1a9cc98d49bc6db8
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 34
LZEndpointMock.constructor confirmed Block: 40 Gas used: 2388416 (19.90%)
LZEndpointMock deployed at: 0xc830Ad2FDfCC2f368fE5DeC93b1Dc72ecABb3691

Transaction sent: 0x7d52e9f5e74f8dc6af02551675ccc8992c6a4e01f0ff16d75b9a8315669faad9
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 35
GnomeLand.constructor confirmed Block: 41 Gas used: 3282166 (27.35%)
GnomeLand deployed at: 0xbc8eCcc89650c3E796e803CB009BF9b898CB359

Transaction sent: 0x9a3a6d255a0ef427c57525b5146d828b2b46cefc7e86debfb56e2d7c5a0046f5
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 36
GnomeReferrals.constructor confirmed Block: 42 Gas used: 1686517 (14.05%)
GnomeReferrals deployed at: 0x741e3E1f81041c62C2A97d0b6E567AcaB09A6232

Transaction sent: 0xc766809b5f2ad116f8f89c85e5e5021e9bc8f369d5b11e3f61276b47ea3e44c2
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 37
WETH9.constructor confirmed Block: 43 Gas used: 471464 (3.93%)
WETH9 deployed at: 0x4B0FccF53589c1F185B35db88b8315a0b8F9a3e0
```

```
Transaction sent: 0x48dc11edb69fd7b2c7ebd28c4c557a93c51331e31a10f9c0d397e28ee7c28f7b
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 38
UniswapV3Factory.constructor confirmed Block: 44 Gas used: 5421585 (45.18%)
UniswapV3Factory deployed at: 0xFE0F4Cf8185c0a6Fd65a610FD9488F33aE9095c8

Transaction sent: 0x6fd5fd90e815b7d1996a417bcf78d13b46efa0e4d23f3e133713a2fa05655054
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 39
SwapRouter.constructor confirmed Block: 45 Gas used: 1965571 (16.38%)
SwapRouter deployed at: 0x4e3E7dC9D84dA7BE8f017f4C36153A61341736d4

Transaction sent: 0x544edbead5517d95a63c4dd8d824a634f9a55fd9b8f7ebae3ed2399baf44fa1e
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 40
NFTDescriptor.constructor confirmed Block: 46 Gas used: 4629900 (38.58%)
NFTDescriptor deployed at: 0x0AC45e945A008D3fc19da8f591be8601C1F63130

Transaction sent: 0xaf340627c6b7def5f12b615d54db5a3db7768f44ce8a561a0cb079be540cb93
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 41
NonfungibleTokenPositionDescriptor.constructor confirmed Block: 47 Gas used: 938418 (7.82%)
NonfungibleTokenPositionDescriptor deployed at: 0x5847798CE8c89e3Fff59AE5fA30BEC0d406b5687

Transaction sent: 0xaf4b0bac94054e59ea40a3fbeb5c485308207717bd3e5e5357dd0ecd6d140
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 42
NonfungiblePositionManager.constructor confirmed Block: 48 Gas used: 4431404 (36.93%)
NonfungiblePositionManager deployed at: 0x0C60536783db9ED5A2B216970B10FF2243d317d0

Transaction sent: 0x570034d35c67a2bde6903f7c25c9bc125c6036b020e447f4cb3f62e84986a509
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 43
NonfungiblePositionManager.createAndInitializePoolIfNecessary confirmed Block: 49 Gas used: 4520368 (37.67%)

Transaction sent: 0x64b519681113159d3cd4e4d3417b9df68ce7178962c5eb39344e79d92489d8d9
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 44
UniswapV3Liquidity.constructor confirmed Block: 50 Gas used: 801259 (6.68%)
UniswapV3Liquidity deployed at: 0xaA7e46855e0506401214c9b1C35f3d889669609e

Transaction sent: 0x19051ded0e5fbb871a6edcf077f26fd0c607d499c9c3721c7bfd3e230af3e840
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 45
GnomeFactory.constructor confirmed Block: 51 Gas used: 4877359 (40.64%)
GnomeFactory deployed at: 0xa1910C6e0Fbd0E38cfBabAeC5D1C1D539F81CC63

Transaction sent: 0x76d433ef714abcfbb4ee75e33be9e21b4d383590e0b2b23526ce3f73d0b726fb
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 5
GnomeFactory.mintGnomeFromGnome_ETH confirmed (Must send ETH to the Gnome) Block: 52 Gas used: 22813 (0.19%)

Transaction sent: 0x86732d94362cc4774681f35918fdaffc3280e20d6cec0d91c4b2f2ab7074e3bd
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 46
WETH9.deposit confirmed Block: 53 Gas used: 43769 (0.36%)

Transaction sent: 0x2d1a5224524518c9f445e9a664115c86f420945b39ca33664d9a7fb84e6a89ca
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 47
WETH9.approve confirmed Block: 54 Gas used: 44061 (0.37%)

Transaction sent: 0x0c77d26c3978cbfa3463de1fd3a7c2332f504e45789f832129fcca438eef6a0
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 48
GnomeLand.approve confirmed Block: 55 Gas used: 44040 (0.37%)

Transaction sent: 0x9cdba10d43a9cee69cf1f102514be541d8161727e1b16cf585453cb7e5915280
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 49
GnomeFactory.mintGnomeFromGnome_ETH confirmed (Caller is not the authorized) Block: 56 Gas used: 181825 (1.52%)

Transaction sent: 0x9df265d03cbc4c3ec562aa16aee9f92b7be67f3255e1d3e810ffa62d4a59a107
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 50
Gnomes.setIsAuth confirmed Block: 57 Gas used: 44049 (0.37%)

Transaction sent: 0x8625eb608aa767a41b6dd7fb2e295ae0c5cbb078542d94bb4af5087fdf65699f
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 51
GnomeFactory.mintGnomeFromGnome_ETH confirmed (reverted) Block: 58 Gas used: 5027777 (41.90%)

tests/test_gnome_factory.py::test_mint_gnome_from_gnome PASSED
```



```
tests/test_gnome_factory.py::test_claim_rewards RUNNING
Transaction sent: 0x62c9f429d98fb777e37c302a25c3abbfb06f765b9620021ae166d6eef789108d
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 52
Gnomes.constructor confirmed Block: 59 Gas used: 1862414 (15.52%)
Gnomes deployed at: 0xFb7C5F938835aE34aF48c278C6763E134907Acdb

Transaction sent: 0xc20d33b3811b87893066b48c32cc89887fd3a25332b9170dd52d05c79fe4303c
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 53
LZEndpointMock.constructor confirmed Block: 60 Gas used: 2388416 (19.90%)
LZEndpointMock deployed at: 0xb291024F4b2E4C3767A96a844566a8e93cC828C5

Transaction sent: 0xb3af315d7cd9ad8aa6b9669ce08314d742e233936244ab4f2c67d8b4ba4364e8
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 54
GnomeLand.constructor confirmed Block: 61 Gas used: 3282166 (27.35%)
GnomeLand deployed at: 0xEfE66132727f3831AB4E020357B5Bf615076Df6A

Transaction sent: 0x2b68a6cd4b252adc7d785ab6a10716cf72bbf66e55c200019816f8eb28d9bd00
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 55
GnomeReferrals.constructor confirmed Block: 62 Gas used: 1686517 (14.05%)
GnomeReferrals deployed at: 0xEfDE7eC452f9A203559896F64267809E248D044f

Transaction sent: 0x4c82667ee9ed9c0a0ebaf524411c88336a4a4be287bd449ec1ba4ce53adcb722
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 56
WETH9.constructor confirmed Block: 63 Gas used: 471464 (3.93%)
WETH9 deployed at: 0x93F6bA0E6DcB1Ec0F1aBD808e31e025d6e64Ad97

Transaction sent: 0xc3dbefb6a74badb3926ce91b2ad40c6f2c8379e67436927e1debdec17c426fc3
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 57
UniswapV3Factory.constructor confirmed Block: 64 Gas used: 5421585 (45.18%)
UniswapV3Factory deployed at: 0x342216ff4b4D6899DDE6535D6E50b6Db71654bc4

Transaction sent: 0x07f63011ac08854f6d4c14d2c65be8de3a7f334a2ce20f5849f322c201fbc343
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 58
SwapRouter.constructor confirmed Block: 65 Gas used: 1965571 (16.38%)
SwapRouter deployed at: 0xa5659Fa683b71C907cd346397c694b93aFF40b51

Transaction sent: 0x963e603134c5e501c3cfd8e59bd48f27becf86d3fe78a80e002a8bd70bc47349
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 59
NFTDescriptor.constructor confirmed Block: 66 Gas used: 4629900 (38.58%)
NFTDescriptor deployed at: 0x286677F2b204be093ABBe3e35074352b3392438

Transaction sent: 0xe0b7775e2b8c8361cfd11b4e317f3c7757f6b2ce5c473ea9ad6a1ff74fa37069
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 60
NonfungibleTokenPositionDescriptor.constructor confirmed Block: 67 Gas used: 938430 (7.82%)
NonfungibleTokenPositionDescriptor deployed at: 0xA83Fad7514839b12C0bAcA71e0A7cc63D2Ff1941

Transaction sent: 0x1c5817a017d48302dbeba9702dfd2d5b66986cf9bc949afa85e6896a9469c29e
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 61
NonfungiblePositionManager.constructor confirmed Block: 68 Gas used: 4431404 (36.93%)
NonfungiblePositionManager deployed at: 0x648334435888bb5E44D890a7B319981c48b4B47d

Transaction sent: 0xae9d8acc8fed6dd7b41878fdc28ed66cedad99afa0bd5ab496a098d703edfc75
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 62
NonfungiblePositionManager.createAndInitializePoolIfNecessary confirmed Block: 69 Gas used: 4520368 (37.67%)

Transaction sent: 0x229de74c2022b432c459f25910cb3b1f25f97e7152f6856befec6849ae2d114b
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 63
UniswapV3Liquidity.constructor confirmed Block: 70 Gas used: 801259 (6.68%)
UniswapV3Liquidity deployed at: 0x0764A8da0FCAa127b31E13b79E9a273Fb582bF26

Transaction sent: 0x31d257a902c9beb3637d12b970c09d3b17463b89406f0b42a3008016c394aee7
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 64
GnomeFactory.constructor confirmed Block: 71 Gas used: 4877359 (40.64%)
GnomeFactory deployed at: 0x2acC1AbFdC76E48e49c91f5551206684DD6555Dd

Transaction sent: 0x1d1488e2562e61035c5eaac931ea1bd48d3c44632b22e8ca91a128cfa83d4d07
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 6
GnomeFactory.claimRewards confirmed (reverted) Block: 72 Gas used: 29255 (0.24%)
```

```
tests/test_gnome_factory.py::test_claim_rewards PASSED
tests/test_gnome_factory.py::test_claim_rewards_auth RUNNING
Transaction sent: 0x6e3c001ce7d0f3bb57c2cd0adc350eb17dab0bd09186a95e8635291f0cd5d517
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 65
Gnomes.constructor confirmed Block: 73 Gas used: 1862414 (15.52%)
Gnomes deployed at: 0xFd87ceEa79b211268Fb182a48E43644543c08709

Transaction sent: 0x4ed220790e3aa239823a514d22db9d6833259d6fbc5f5ccc5f53baa7f2188d85
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 66
LZEndpointMock.constructor confirmed Block: 74 Gas used: 2388416 (19.90%)
LZEndpointMock deployed at: 0x7e4ED6273177126c48503850a526845bed16E747

Transaction sent: 0xf82c5cb3ada719ffbe9dcb805058b27e0dad297abd6a907f318c53fc329f9be6
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 67
GnomeLand.constructor confirmed Block: 75 Gas used: 3282166 (27.35%)
GnomeLand deployed at: 0xA2ea57c9C7ED08D48F5d920d774b6Fe55465d86f

Transaction sent: 0x96ebb37fd3df41e4665d98e022711088e9a5045b751d167680d4a6360a84f865
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 68
GnomeReferrals.constructor confirmed Block: 76 Gas used: 1686517 (14.05%)
GnomeReferrals deployed at: 0x6a21483D01cFb6FAf0D5346C1e781337425D713B

Transaction sent: 0x183ddc22a047f57042dee60ce6927d5b9fa1bb3a0c1d5a99613c1e59d588708e
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 69
WETH9.constructor confirmed Block: 77 Gas used: 471464 (3.93%)
WETH9 deployed at: 0x78Cbd5DCBE1d42458D8C5b2397C68d18198E8066

Transaction sent: 0x1da7a7c48ac8b69cb6d5ff7382beaf12a56d693107519f2409191dabfde53728
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 70
UniswapV3Factory.constructor confirmed Block: 78 Gas used: 5421585 (45.18%)
UniswapV3Factory deployed at: 0xAe4059E2E23958f627eF75d2467343F4d8838709

Transaction sent: 0x2beebdd75550649d88a6fcb56bd691a41f90fc6b78d66f5d4894f73d08a67cef
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 71
SwapRouter.constructor confirmed Block: 79 Gas used: 1965571 (16.38%)
SwapRouter deployed at: 0x47a27C9881B5C5eC78c38FBEE7DD0A5eb68633C

Transaction sent: 0x36ea6165a942064602d42e5fc80c4ad95db7fa123d7508a5b71cf616e4d9f974
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 72
NFTDescriptor.constructor confirmed Block: 80 Gas used: 4629900 (38.58%)
NFTDescriptor deployed at: 0x63Cf24e22bbFAA28316Cca9b179eEC7810b8037B

Transaction sent: 0x432c7797067f65eaf41d2b717eb1a638040d7851ae604e0914c3fe98267d2c71
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 73
NonfungibleTokenPositionDescriptor.constructor confirmed Block: 81 Gas used: 938430 (7.82%)
NonfungibleTokenPositionDescriptor deployed at: 0x8d841305cA5f2852135dC2B969ba6084A32D4700

Transaction sent: 0x98072fe36815d66a9449bddd41ba27e13a2ee6dbbb7ec4bb923117ec89927eba
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 74
NonfungiblePositionManager.constructor confirmed Block: 82 Gas used: 4431392 (36.93%)
NonfungiblePositionManager deployed at: 0x795af5f6648254fFAA8fCd35ff03a4dCEe5054c9

Transaction sent: 0xfcae27dee66a1e614956b98f0de9a43a329b5e2be2a1edac8c29de953ef9ccda
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 75
NonfungiblePositionManager.createAndInitializePoolIfNecessary confirmed Block: 83 Gas used: 4520368 (37.67%)

Transaction sent: 0x783071eb715e83812aab75a98373580e3c8d11772a4dee6989f800dfdbc42496
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 76
UniswapV3Liquidity.constructor confirmed Block: 84 Gas used: 801259 (6.68%)
UniswapV3Liquidity deployed at: 0x2E51a0DB587eadCF8495B41Bf3FC9f4F706d0028

Transaction sent: 0x214080cb57062a2566ba15ed987e0ec869a36d65bbf798817f814e1f86ed3a89
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 77
GnomeFactory.constructor confirmed Block: 85 Gas used: 4877359 (40.64%)
GnomeFactory deployed at: 0x6057028AEb3086440A01577fcD18C5eC77305c47
```

```
Transaction sent: 0xd2c6d491509431839abbb7eb37b3182e2fe8aa9d30f6c9524e84465cd15ebdeb
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 7
GnomeFactory.claimRewardsAuth confirmed (Caller is not the authorized) Block: 86 Gas used: 24451 (0.20%)

Transaction sent: 0x87cb4936fff650453dead38cc8bb901dce007fba4beb0d726a1750b9dd44ef52
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 78
GnomeFactory.claimRewardsAuth confirmed (reverted) Block: 87 Gas used: 31310 (0.26%)

tests/test_gnome_factory.py::test_claim_rewards_auth PASSED
```

Gnome nft:

```
tests/test_gnomes_nft.py::test_mint RUNNING
Transaction sent: 0xd2900bf5714f3401c651cb2daac884b44c6205adb2d3c229e8c7a82909fbf10b
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 0
Gnomes.constructor confirmed Block: 1 Gas used: 1862414 (15.52%)
Gnomes deployed at: 0x3194cBDC3dbcd3E11a07892e7bA5c3394048Cc87

Transaction sent: 0xc298a6cfd3a9b47d40d7d93477dca76fca4bf19334738ca8efef5cdffb39d0c8
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 0
Gnomes.mint confirmed (Caller is not the authorized) Block: 2 Gas used: 24109 (0.20%)

Transaction sent: 0x747ac7c02bb00df3194ca88c3af7fe28077d563aac2041114e2485d1523dda1f
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 1
Gnomes.mint confirmed Block: 3 Gas used: 155792 (1.30%)

Transaction sent: 0x6262026a971f4d63a0dee9c6591e733cd9a8a94636e61e34dea01cb5fa9b1a40
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 2
Gnomes.mint confirmed Block: 4 Gas used: 129992 (1.08%)

tests/test_gnomes_nft.py::test_mint PASSED
tests/test_gnomes_nft.py::test_hp RUNNING
Transaction sent: 0xf803fc8957fe33757f0cf1db217ba21549f9a2f3424e55b2548cdc4928139ebb
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 3
Gnomes.constructor confirmed Block: 5 Gas used: 1862414 (15.52%)
Gnomes deployed at: 0x6951b58d815043E3F842c1b026b0Fa888Cc2DD85

Transaction sent: 0x9e51a24c3effb6f52d714e13fee8312d336f12ec6cf17073174708a2b42f4cc8
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 1
Gnomes.setHP confirmed (Caller is not the authorized) Block: 6 Gas used: 23602 (0.20%)

Transaction sent: 0xf5158d5455888d763ec4b9b78d6f32adc9f3f0814ff8cefa23675d26c9eae562
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 4
Gnomes.mint confirmed Block: 7 Gas used: 155792 (1.30%)

Transaction sent: 0xd929137a1670066f54bcf379684e82aa2605a2a0286e33ef3b5014976d0a9738
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 5
Gnomes.setHP confirmed Block: 8 Gas used: 27704 (0.23%)

Transaction sent: 0x2de21b4582fa5360e8869f8c87cf75830348612c4e08bb0c361de260e3b6d804
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 6
Gnomes.setHP confirmed Block: 9 Gas used: 22538 (0.19%)

tests/test_gnomes_nft.py::test_hp PASSED
```

```
tests/test_gnomes_nft.py::test_hp PASSED
tests/test_gnomes_nft.py::test_signup RUNNING
Transaction sent: 0xe3bafb7241bac8ef586e63ecf1bae2ba5605f1f72ae90d6b9f44d8541ce75213
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 7
Gnomes.constructor confirmed Block: 10 Gas used: 1862414 (15.52%)
Gnomes deployed at: 0xcCB53c9429d32594F404d01fbe9E65ED1DCda8D9

Transaction sent: 0x27099de394630047922482bd5e7021bf6bea70b3844aac153ac5c12d8da176e3
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 2
Gnomes.signUp confirmed (ERC721: invalid token ID) Block: 11 Gas used: 23598 (0.20%)

Transaction sent: 0x0a21b7f349e6845ecc51afc33518a95af0a99a657a908a32080e9018a670d569
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 8
Gnomes.mint confirmed Block: 12 Gas used: 155792 (1.30%)

Transaction sent: 0x373b12711e85b9283307c99af68a73bd16df0ac44871b03fc6e6aa222a31f725
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 9
Gnomes.mint confirmed Block: 13 Gas used: 129992 (1.08%)

Transaction sent: 0xe4f0234273d93473d1f3b573198e8e9d8e8114ad0b42c03f79033cca70ff4d20
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 3
Gnomes.signUp confirmed (Not Auth) Block: 14 Gas used: 23667 (0.20%)

Transaction sent: 0x20013eac869d2e308908fa498fae68cd9eda2be935022c86255c371279658af
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 0
Gnomes.signUp confirmed Block: 15 Gas used: 49207 (0.41%)

tests/test_gnomes_nft.py::test_signup PASSED
```

Annexes

Testing code:

Gnome.py

```
from eth_abi import encode

from brownie import (
    reverts,
)

from scripts.helpful_scripts import (
    ZERO_ADDRESS,
    get_account,
)

from scripts.deploy import (
    deploy_gnome_land,
    deploy_lz_endpoint
)

def test_bridge(only_local):
    #arrange
    owner = get_account(0)
    other = get_account(1)
    random_addr = get_account(2)

    lz_endpoint = deploy_lz_endpoint(owner, chain_id=50)
    gnomes = deploy_gnome_land(owner, lz_endpoint.address)

    # assert
    with reverts("Maximum allowed bridge exceeded"):
        gnomes.bridge("eth", 730000e18, {"from": other})

    with reverts("Caller is not the authorized to bridge"):
        gnomes.bridge("eth", 5e18, {"from": other})

    gnomes.setChainId("test", "50")
    with reverts("LzApp: destination chain is not a trusted source"):
        gnomes.bridge("test", 1e18, {"from": owner})

    data = encode(['address'], [str(random_addr)])
    gnomes.trustAddress("test", random_addr, {"from": owner})
    gnomes.setTrustedRemoteAddress(50, data, {"from": owner})

    with reverts("LayerZeroMock: incorrect remote address size"):
        gnomes.bridge("test", 1e18, {"from": owner})
```



```

def test_max_wallet(only_local):
    #arrange
    owner = get_account(0)
    other = get_account(1)

    lz_endpoint = deploy_lz_endpoint(owner)
    gnomes = deploy_gnome_land(owner, lz_endpoint.address)

    # assert
    with reverts("Caller is not the authorized"):
        gnomes.setMaxWallet(730000e18, {"from": other})
    with reverts("New max wallet size must be greater than current size"):
        gnomes.setMaxWallet(1000, {"from": owner})
    assert gnomes.maxWalletSize() == 233000e18
    gnomes.setMaxWallet(234000e18, {"from": owner})
    assert gnomes.maxWalletSize() == 234000e18

def test_increase_max_trade_amount(only_local):
    #arrange
    owner = get_account(0)
    other = get_account(1)

    lz_endpoint = deploy_lz_endpoint(owner)
    gnomes = deploy_gnome_land(owner, lz_endpoint.address)

    # assert
    with reverts("Caller is not the authorized"):
        gnomes.increaseMaxTradeAmount(70000e18, {"from": other})
    with reverts("Cannot decrease max trade amount"):
        gnomes.increaseMaxTradeAmount(1000, {"from": owner})
    assert gnomes.maxTradeAmount() == 69000e18
    gnomes.increaseMaxTradeAmount(70000e18, {"from": owner})
    assert gnomes.maxTradeAmount() == 70000e18

def test_increase_max_trade_amount(only_local):
    #arrange
    owner = get_account(0)
    other = get_account(1)

    lz_endpoint = deploy_lz_endpoint(owner)
    gnomes = deploy_gnome_land(owner, lz_endpoint.address)

    # assert
    with reverts("Caller is not the authorized"):
        gnomes.increaseMaxSellAmount(73000e18, {"from": other})
    with reverts("Cannot decrease max trade amount"):
        gnomes.increaseMaxSellAmount(1000, {"from": owner})
    assert gnomes.maxSellAmount() == 72000e18

```



```

gnomes.increaseMaxSellAmount(73000e18, {"from": owner})
assert gnomes.maxSellAmount() == 73000e18

def test_set_bridge_fee(only_local):
    #arrange
    owner = get_account(0)
    other = get_account(1)

    lz_endpoint = deploy_lz_endpoint(owner)
    gnomes = deploy_gnome_land(owner, lz_endpoint.address)

    # assert
    with reverts("Caller is not the authorized"):
        gnomes.setBridgeFee(10, {"from": other})
    with reverts("Bridge Fee can't be bigger than 10%"):
        gnomes.setBridgeFee(1000, {"from": owner})
    assert gnomes.bridgeFee() == 1
    gnomes.setBridgeFee(10, {"from": owner})
    assert gnomes.bridgeFee() == 10

def test_transfer(only_local):
    #arrange
    owner = get_account(0)
    other = get_account(1)
    extra = get_account(2)

    lz_endpoint = deploy_lz_endpoint(owner)
    gnomes = deploy_gnome_land(owner, lz_endpoint.address)

    # assert
    gnomes.transfer(other, 5e18, {"from": owner})
    gnomes.transfer(extra, 5e18, {"from": owner})
    with reverts("Trade Not Opened"):
        gnomes.transfer(extra, 1e18, {"from": other})
    gnomes.openTrade({"from": owner})
    tx = gnomes.transfer(extra, 1e18, {"from": other})
    assert tx.events["Transfer"] is not None
    assert tx.events["Transfer"][0]["from"] == other
    assert tx.events["Transfer"][0]["to"] == extra
    assert tx.events["Transfer"][0]["value"] == 1e18

```

Gnome_factory.py:

```
from brownie import (
    reverts,
    UniswapV3Pool
)

from brownie.network.contract import Contract

from scripts.helpful_scripts import (
    ZERO_ADDRESS,
    get_account,
)

from scripts.deploy import (
    deploy_gnome_land,
    deploy_lz_endpoint,
    deploy_gnomes,
    deploy_gnome_factory,
    deploy_gnome_referrals,
    # dependencies
    deploy_weth9,
    deploy_uniswap_v3_factory,
    deploy_swap_router,
    deploy_position_manager,
    deploy_position_descriptor,
    deploy_uniswap_v3_liquidity
)

def test_mint_gnome(only_local):
    # arrange
    owner = get_account(0)
    other = get_account(1)

    # Deployment gnome
    gnomes_nft = deploy_gnomes(owner)
    lz_endpoint = deploy_lz_endpoint(owner)
    gnomes = deploy_gnome_land(owner, lz_endpoint.address)
    gnome_ref = deploy_gnome_referrals(owner, gnomes.address)
    # Deployment weth, router and factory
    weth = deploy_weth9(owner)
    factory = deploy_uniswap_v3_factory(owner)
    router = deploy_swap_router(owner, factory.address, weth.address)
    # Deploy PositionManager
    position_descriptor = deploy_position_descriptor(owner, weth.address,
0x4c4142454c)
    position_manager = deploy_position_manager(owner, factory.address, weth.address,
position_descriptor.address)
    tx = position_manager.createAndInitializePoolIfNecessary(weth.address,
```

```

gnomes.address, 500, 79228162514264337593543950336, {"from": owner})
    pool = Contract.from_abi("UniswapV3Pool", tx.return_value, UniswapV3Pool.abi)

    # Liquidity
    liquidity = deploy_uniswap_v3_liquidity(owner, weth.address, gnomes.address,
position_manager.address)

    gnome_factory = deploy_gnome_factory(owner,
        gnomes_nft.address, gnomes.address, gnome_ref.address,
        router.address, weth.address, position_manager.address)

    with reverts("Not Enough to mint Gnome"):
        gnome_factory.mintGnome({"from": other})
    with reverts("Minting Not Opened to Public"):
        gnome_factory.mintGnome({"from": other, "value": 1e18})
    gnome_factory.openMint(True, {"from": owner})

    # Add liquidity
    weth.deposit({"from": owner, "value": 15e18})
    weth.approve(liquidity.address, 100e18, {"from": owner})
    gnomes.approve(liquidity.address, 100e18, {"from": owner})

    with reverts():
        gnome_factory.mintGnome({"from": other, "value": 1e18})

def test_mint_gnome_referral(only_local):
    #arrange
    owner = get_account(0)
    other = get_account(1)

    # Deployment gnome
    gnomes_nft = deploy_gnomes(owner)
    lz_endpoint = deploy_lz_endpoint(owner)
    gnomes = deploy_gnome_land(owner, lz_endpoint.address)
    gnome_ref = deploy_gnome_referrals(owner, gnomes.address)
    # Deployment weth, router and factory
    weth = deploy_weth9(owner)
    factory = deploy_uniswap_v3_factory(owner)
    router = deploy_swap_router(owner, factory.address, weth.address)
    # Deploy PositionManager
    position_descriptor = deploy_position_descriptor(owner, weth.address,
0x4c4142454c)
    position_manager = deploy_position_manager(owner, factory.address, weth.address,
position_descriptor.address)
    tx = position_manager.createAndInitializePoolIfNecessary(weth.address,
gnomes.address, 500, 79228162514264337593543950336, {"from": owner})
    pool = Contract.from_abi("UniswapV3Pool", tx.return_value, UniswapV3Pool.abi)

    # Liquidity

```

```

    liquidity = deploy_uniswap_v3_liquidity(owner, weth.address, gnomes.address,
position_manager.address)
    gnome_factory = deploy_gnome_factory(owner,
        gnomes_nft.address, gnomes.address, gnome_ref.address,
        router.address, weth.address, position_manager.address)

    with reverts("Not Enough to mint Gnome"):
        gnome_factory.mintGnomeReferral("code", {"from": other})

    with reverts("Minting Not Opened to Referrals"):
        gnome_factory.mintGnomeReferral("code", {"from": other, "value": 1e18})

    with reverts("Caller is not the authorized"):
        gnome_factory.mintGnomeReferral("code", {"from": owner, "value": 1e18})

    gnome_ref.setIsAuth(gnome_factory.address, True, {"from": owner})
    with reverts("Invalid referral code"):
        gnome_factory.mintGnomeReferral("code", {"from": owner, "value": 1e18})

def test_mint_gnome_from_gnome(only_local):
    #arrange
    owner = get_account(0)
    other = get_account(1)

    # Deployment gnome
    gnomes_nft = deploy_gnomes(owner)
    lz_endpoint = deploy_lz_endpoint(owner)
    gnomes = deploy_gnome_land(owner, lz_endpoint.address)
    gnome_ref = deploy_gnome_referrals(owner, gnomes.address)
    # Deployment weth, router and factory
    weth = deploy_weth9(owner)
    factory = deploy_uniswap_v3_factory(owner)
    router = deploy_swap_router(owner, factory.address, weth.address)
    # Deploy PositionManager
    position_descriptor = deploy_position_descriptor(owner, weth.address,
0x4c4142454c)
    position_manager = deploy_position_manager(owner, factory.address, weth.address,
position_descriptor.address)
    tx = position_manager.createAndInitializePoolIfNecessary(weth.address,
gnomes.address, 500, 79228162514264337593543950336, {"from": owner})
    pool = Contract.from_abi("UniswapV3Pool", tx.return_value, UniswapV3Pool.abi)

    # Liquidity
    liquidity = deploy_uniswap_v3_liquidity(owner, weth.address, gnomes.address,
position_manager.address)
    gnome_factory = deploy_gnome_factory(owner,
        gnomes_nft.address, gnomes.address, gnome_ref.address,
        router.address, weth.address, position_manager.address)

```

```

with reverts("Must send ETH to the Gnome"):
    gnome_factory.mintGnomeFromGnome_ETH(1e18, {"from": other})

weth.deposit({"from": owner, "value": 15e18})
weth.approve(gnome_factory.address, 100e18, {"from": owner})
gnomes.approve(gnome_factory.address, 100e18, {"from": owner})

with reverts("Caller is not the authorized"):
    gnome_factory.mintGnomeFromGnome_ETH(1e18, {"from": owner, "value": 1e18})

gnomes_nft.setIsAuth(gnome_factory.address, True, {"from": owner})
with reverts():
    gnome_factory.mintGnomeFromGnome_ETH(1e18, {"from": owner, "value": 1e18})

def test_claim_rewards(only_local):
    #arrange
    owner = get_account(0)
    other = get_account(1)
    extra = get_account(2)

    # Deployment gnome
    gnomes_nft = deploy_gnomes(owner)
    lz_endpoint = deploy_lz_endpoint(owner)
    gnomes = deploy_gnome_land(owner, lz_endpoint.address)
    gnome_ref = deploy_gnome_referrals(owner, gnomes.address)
    # Deployment weth, router and factory
    weth = deploy_weth9(owner)
    factory = deploy_uniswap_v3_factory(owner)
    router = deploy_swap_router(owner, factory.address, weth.address)
    # Deploy PositionManager
    position_descriptor = deploy_position_descriptor(owner, weth.address,
0x4c4142454c)
    position_manager = deploy_position_manager(owner, factory.address, weth.address,
position_descriptor.address)
    tx = position_manager.createAndInitializePoolIfNecessary(weth.address,
gnomes.address, 500, 79228162514264337593543950336, {"from": owner})
    pool = Contract.from_abi("UniswapV3Pool", tx.return_value, UniswapV3Pool.abi)

    # Liquidity
    liquidity = deploy_uniswap_v3_liquidity(owner, weth.address, gnomes.address,
position_manager.address)
    gnome_factory = deploy_gnome_factory(owner,
gnomes_nft.address, gnomes.address, gnome_ref.address,
router.address, weth.address, position_manager.address)

    with reverts():
        gnome_factory.claimRewards({"from": other})

def test_claim_rewards_auth(only_local):

```



```

#arrange
owner = get_account(0)
other = get_account(1)

# Deployment gnome
gnomes_nft = deploy_gnomes(owner)
lz_endpoint = deploy_lz_endpoint(owner)
gnomes = deploy_gnome_land(owner, lz_endpoint.address)
gnome_ref = deploy_gnome_referrals(owner, gnomes.address)
# Deployment weth, router and factory
weth = deploy_weth9(owner)
factory = deploy_uniswap_v3_factory(owner)
router = deploy_swap_router(owner, factory.address, weth.address)
# Deploy PositionManager
position_descriptor = deploy_position_descriptor(owner, weth.address,
0x4c4142454c)
position_manager = deploy_position_manager(owner, factory.address, weth.address,
position_descriptor.address)
tx = position_manager.createAndInitializePoolIfNecessary(weth.address,
gnomes.address, 500, 79228162514264337593543950336, {"from": owner})
pool = Contract.from_abi("UniswapV3Pool", tx.return_value, UniswapV3Pool.abi)

# Liquidity
liquidity = deploy_uniswap_v3_liquidity(owner, weth.address, gnomes.address,
position_manager.address)
gnome_factory = deploy_gnome_factory(owner,
gnomes_nft.address, gnomes.address, gnome_ref.address,
router.address, weth.address, position_manager.address)

with reverts("Caller is not the authorized"):
    gnome_factory.claimRewardsAuth(other, 1e18, {"from": other})
with reverts():
    gnome_factory.claimRewardsAuth(other, 1e18, {"from": owner})

```

Gnomes_nft.py:

```
from brownie import (
    reverts,
)

from scripts.helpful_scripts import (
    ZERO_ADDRESS,
    get_account,
)

from scripts.deploy import (
    deploy_gnomes
)

def test_mint(only_local):
    #arrange
    owner = get_account(0)
    other = get_account(1)
    random_addr = get_account(2)

    gnomes_nft = deploy_gnomes(owner)

    # assert
    with reverts("Caller is not the authorized"):
        gnomes_nft.mint(random_addr, {"from": other})
    tx = gnomes_nft.mint(random_addr, {"from": owner})
    assert tx.events["Transfer"] is not None
    assert tx.events["Transfer"][0]["from"] == ZERO_ADDRESS
    assert tx.events["Transfer"][0]["to"] == random_addr
    assert tx.events["Transfer"][0]["tokenId"] == 0

    tx = gnomes_nft.mint(random_addr, {"from": owner})
    assert tx.events["Transfer"] is not None
    assert tx.events["Transfer"][0]["from"] == ZERO_ADDRESS
    assert tx.events["Transfer"][0]["to"] == random_addr
    assert tx.events["Transfer"][0]["tokenId"] == 1

def test_hp(only_local):
    #arrange
    owner = get_account(0)
    other = get_account(1)
    random_addr = get_account(2)

    gnomes_nft = deploy_gnomes(owner)

    # assert
    with reverts("Caller is not the authorized"):
        gnomes_nft.setHP(1, 150, {"from": other})
```

```

gnomes_nft.mint(random_addr, {"from": owner})
assert gnomes_nft.getHP(0) == 100
gnomes_nft.setHP(0, 200, {"from": owner})
assert gnomes_nft.getHP(0) == 200
tx = gnomes_nft.setHP(0, 0, {"from": owner})
assert tx.events["Transfer"] is not None
assert tx.events["Transfer"][0]["from"] == random_addr
assert tx.events["Transfer"][0]["to"] == ZERO_ADDRESS
assert tx.events["Transfer"][0]["tokenId"] == 0
assert gnomes_nft.getHP(0) == 0

def test_signup(only_local):
    #arrange
    owner = get_account(0)
    other = get_account(1)
    random_addr = get_account(2)

    gnomes_nft = deploy_gnomes(owner)

    # assert
    with reverts("ERC721: invalid token ID"):
        gnomes_nft.signup(1, "Hi", {"from": other})





    # mint some tokens
    gnomes_nft.mint(random_addr, {"from": owner})
    gnomes_nft.mint(random_addr, {"from": owner})

    with reverts("Not Auth"):
        gnomes_nft.signup(1, "Hi", {"from": other})
        gnomes_nft.signup(1, "Hi", {"from": random_addr})

```

Technical Findings Summary

Findings

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

Assessment Results

Score Results

Review	Score
Global Score	85/100
Assure KYC	Not completed
Audit Score	90/100

The Following Score System Has been Added to this page to help understand the value of the audit, the maximum score is 100, however to attain that value the project must pass and provide all the data needed for the assessment. Our Passing Score has been changed to 84 Points for a higher standard, if a project does not attain 85% is an automatic failure. Read our notes and final assessment below. The Global Score is a combination of the evaluations obtained between having or not having KYC and the type of contract audited together with its manual audit.

Audit Pass

Following our comprehensive security audit of the Solidity project Gnome Land, we inform you that the project has met the necessary security standards, in any case, we recommend reviewing and resolving the issues identified in the audit.

Disclaimer

Assure Defi has conducted an independent security assessment to verify the integrity of and highlight any vulnerabilities or errors, intentional or unintentional, that may be present in the reviewed code for the scope of this assessment. This report does not constitute agreement, acceptance, or advocating for the Project, and users relying on this report should not consider this as having any merit for financial advice in any shape, form, or nature. The contracts audited do not account for any economic developments that the Project in question may pursue, and the veracity of the findings thus presented in this report relate solely to the proficiency, competence, aptitude, and discretion of our independent auditors, who make no guarantees nor assurance that the contracts are entirely free of exploits, bugs, vulnerabilities or deprecation of technologies.

All information provided in this report does not constitute financial or investment advice, nor should it be used to signal that any person reading this report should invest their funds without sufficient individual due diligence, regardless of the findings presented. Information is provided 'as is, and Assure Defi is under no covenant to audit completeness, accuracy, or solidity of the contracts. In no event will Assure Defi or its partners, employees, agents, or parties related to the provision of this audit report be liable to any parties for, or lack thereof, decisions or actions with regards to the information provided in this audit report.

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