

Factory

This documentation provides an overview of the IFactory.sol. This contract defines the functions and events for creating and managing pools on Maverick AMM.

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Contract Details

- Name :
- IFactory
- Solidity Version :
- ^0.8.0
- SPDX License-Identifier : GPL-2.0-or-later
- Factory
- is Deployed to
 - Ethereum:[0xEb6625D65a0553c9dBc64449e56abFe519bd9c9B](#)
 - ZKSync Era:[0x2C1a605f843A2E18b7d7772f0Ce23c236acCF7f5](#)
- *
- Code:[Github](#)
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Events

PoolCreated

Event emitted when a new pool is created.

...

Copy eventPoolCreated(addresspoolAddress, uint256fee, uint256tickSpacing, int32activeTick, int256lookback, uint64protocolFeeRatio, IERC20 tokenA, IERC20 tokenB);

...

- Parameters :
- - poolAddress
 - : Theaddress
 - of the created pool

- - fee
- - : The rate in 60×18
- - decimal format
- - tickSpacing
- - : The bin width represented as $1.0001^{\text{tickSpacing}}$
- - activeTick
- - : The initial active tick of the pool
- - lookback
- - : The time-weighted average price(TWAP)
- - lookback in whole seconds
- - protocolFeeRatio
- - : The ratio of the swap fee that is kept for the protocol
- - tokenA
- - : The ERC20
- - token A used in the pool
- - tokenB
- - : The ERC20
- - token B used in the pool
- *
-

SetFactoryProtocolFeeRatio

Event emitted when the protocol fee ratio is updated.

...

Copy eventSetFactoryProtocolFeeRatio(uint64protocolFeeRatio);

...

- Parameters :
- - protocolFeeRatio
- - : The new protocol fee ratio
- *
-

SetFactoryOwner

Event emitted when the owner of the factory is updated.

...

Copy eventSetFactoryOwner(addressowner);

...

- Parameters :
- - owner

- - : The new owneraddress
- *
-

Functions

create()

Creates a new pool.

...

Copy functioncreate(uint256_fee, uint256_tickSpacing, int256_lookback, int32_activeTick, IERC20_tokenA, IERC20_tokenB)externalreturns(IPool);

...

- Parameters :
- - _fee
- - : The rate in $prbmath\ 60 \times 18$
- - decimal format
- - _tickSpacing
- - : The bin width represented as $1.0001^{tickSpacing}$
- - _lookback
- - : The time-weighted average price (TWAP) lookback in whole seconds
- - _activeTick
- - : The initial active tick of the pool
- - _tokenA
- - : The ERC20 token A to be used in the pool
- - _tokenB
- - : The ERC20 token B to be used in the pool
- *
- Returns :
- - IPool
- - : An instance of the IPool
- - interface representing the created pool
- *
-

lookup()

Looks up an existing pool based on the specified parameters.

...

Copy functionlookup(uint256fee, uint256tickSpacing, int256lookback, IERC20tokenA, IERC20tokenB)externalviewreturns(IPool);

...

- Parameters :
- - fee

- - : The rate in 60×18
- - decimal format
- - tickSpacing
- - : The bin width represented as $1.0001^{\text{tickSpacing}}$
- - lookback
- - : The time-weighted average price(TWAP)
- - lookback in wholeseconds
- - tokenA
- - : TheERC20
- - token A used in the pool
- - tokenB
- - : TheERC20
- - token B used in the pool
- *
- Returns :
- - IPool
- - : An instance of theIPool
- - interface representing the found pool, or a zero
- - address if no pool matches the parameters
- *
-

owner()

Retrieves the address of the factory owner.

...

Copy functionowner()externalviewreturns(address);

...

- Returns :
- - address
- - : Theaddress
- - of the factory owner
- *
-

position()

Retrieves the IPosition interface associated with the factory.

...

Copy functionposition()externalviewreturns(IPosition);

...

- Returns :

- - IPosition
- - : An instance of theIPosition
- - interface associated with the factory
- *
-

protocolFeeRatio()

Retrieves the current protocol fee ratio.

...

Copy functionprotocolFeeRatio()externalviewreturns(uint64);

...

- Returns :
- - The current protocol fee ratio inuint64
- - .
- *
-

isFactoryPool(IPool pool)

Checks if a pool is owned by the factory.

...

Copy functionisFactoryPool(IPoolpool)externalviewreturns(bool);

...

- Parameters :
- - pool
- - : An instance of theIPool
- - interface representing the pool to check.
- *
- Returns :
- - Aboolean
- - indicating whether the pool is owned by the factory.
- *
-

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