

Collateral Module

Adapters and Auction contracts for each specific collateral type * Module Name: * Collateral Module * Type/Category: * DSS
—> join.sol, clip.sol * [Associated MCD System Diagram](#) * Contract Sources: * [Join](#) * [Clip](#) * * *

1. Introduction (Summary)

The collateral module is deployed for every newilk (collateral type) added toVat . It contains all the adapters and auction contracts for one specific collateral type.

For other information related to the collateral module, read the following resources:

- [Auctions & Keepers within MCD 101](#)
- [How to Run Your Own Auction Keeper Bot in MCD Blog Post](#)
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1. Module Details

The Collateral Module has 3 core components consisting of thejoin , andflip contracts.

The Collateral Module is built up of the following components:

1. [Join Documentation](#)
2. Clipper Contract - see
3. [Liquidation 2.0 Documentation](#)
- 4.

1. Key Mechanism and Concepts

Summary of theCollateral Module Components

- Join
- - adapters that are used to deposit/withdraw unlocked collateral into theVat
- . Join contains three smart contracts:
- 1. GemJoin
- 1. ETHJoin
- 1. DaiJoin
- 1. .
- - 1.
- Each of thejoin
- contracts are specifically used for the given token type to bejoin
- 'ed to thevat
- . Due to this fact, eachjoin
- contract has slightly different logic to account for the different types of tokens within the system.
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How exactly do theJoin contracts help the MCD system operate?

- Join
- - the purpose of join adapters is to retain the security of the system, allowing only trusted smart contracts to add/remove value to/from theVat
- . The location of collateral deposited/locked in Vaults is in the respective Join adapter.
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1. Gotchas (Potential sources of user error)

2. When a user desires to enter the system and interact with thedss

3. contracts, they must use one of thejoin
4. contracts.
5. If there was a contract bug in ajoin
6. contract and a user was to calljoin

7. by accident, they can still retrieve their tokens back through the corresponding exit
8. call on the given join
9. contract.
- 10.

1. Failure Modes

There could potentially be a vat upgrade that would require new join contracts to be created

If a gem contract were to go through a token upgrade or have the tokens frozen while a user's collateral was in the system, there could potentially be a scenario in which the users were unable to redeem their collateral after the freeze or upgrade was finished. This seems to be a small risk though because it would seem likely that the token going through this upgrade would want to work alongside the maker community to be sure this was not an issue.

Potential Phishing Attacks

As the MCD system evolves, we will see many more join contracts, user interfaces, etc. This surfaces the potential for a user to have their funds stolen by a malicious join contract which would send tokens to an external contract or wallet, instead of the vat.

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