# 292.https://stackoverflow.com/questions/71757994/add-royalty-to-solidity-nft-smart-contract

**T:**Add Royalty to solidity NFT smart contract

**Q:**how can I add royalty to Nft collection at the smart contract level, without using solutions from marketplaces?  
  
I use https://github.com/scaffold-eth this official repo for my task

3 **Answer**

**A1:**The only way to add royalties at the smart contract level without breaking the ER721 Standard is to implement a custom transferFrom function which requires the royalty be paid on every transfer.  
  
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This is generally not implemented because it means that users cannot transfer between their wallets without paying the royalty.  
  
There is an EIP around NFT royalties to suggest a standard for defining on-chain royalties, however, marketplaces would still be responsible for enforcing the standard.  
  
If you are not relying on third party marketplaces, then you could add a 'trade' function to your NFT, which implements the logic for an exchange between a currency and the NFT. However, this would not be used by marketplaces like OpenSea and would only be a viable solution if you plan to implement your own marketplace.

**C1:**But would this work with eth where the the transferFrom function will have to be modified to payable?.

**A2:**There is EIP-2981 .  
  
The Royalty smart contract from thirdweb is an extension usable with any base smart contract. It implements EIP-2981 NFT royalty standard for royalty support on NFT marketplaces.  
  
But there is another proposal from manifold as well: royalty-registry  
  
It provides the ability for contracts that did not originally supportany of the on-chain Royalty specifications to add this functionalityto their smart contract. A reference EIP-2981 override implementationcan be found here:https://github.com/manifoldxyz/royalty-registry-solidity/blob/main/contracts/overrides/RoyaltyOverride.sol.  
  
Still, market places actually may not use this information. Your smart contract still lets the transfer to happen without the royalty fee.e.g. Sudoswap and now X2Y2 let the seller-buyer decide to pay the royalty fees or not.  
  
To avoid that make a simple tweak to the approval methods in ERC721 that whitelist specific marketplaces: https://gist.github.com/cygaar/6d908d1eb12727d94583ad20b84a06eb

**A3:**Here is a contract where the owner can allow trading on certain marketplaces explicitly by calling the function:  
  
setApprovedMarketplace(address market, bool approved)  
  
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In this case, you could only approve marketplaces that honor royalties.  
  
https://thirdweb.com/joenrv.eth/ERC721DropRestrictedMarkets