

## Authorization through tx.origin

### Description

tx.origin is a global variable in Solidity which returns the address of the account that sent the transaction. Using the variable for authorization could make a contract vulnerable if an authorized account calls into a malicious contract. A call could be made to the vulnerable contract that passes the authorization check since tx.origin returns the original sender of the transaction which in this case is the authorized account.

### Remediation

tx.origin should not be used for authorization. Use msg.sender instead.

### Example:

*Code:*

```
1 pragma solidity 0.4.24;
2
3 contract MyContract {
4
5     address owner;
6
7     function MyContract() public {
8         owner = msg.sender;
9     }
10
11     function sendTo(address receiver, uint amount) public {
12         require(tx.origin == owner);
13         receiver.transfer(amount);
14     }
15
16 }
```

*Explanation:*

It is possible to use a tx.origin global variable to call this contract through a malicious contract, so stealing the owner's balance.

Multiple crypto phishing campaigns have exploited this vulnerability to steal money or tokens from victims.