

# Multi contract execution

With [dedicated msg.sender](#) enabled, you can make use of its multi-call function [batchExecuteCall](#) to execute multiple functions on different contracts.

...

```
Copy function batchExecuteCall( address[] calldata _targets, bytes[] calldata _datas, uint256[] calldata _values
) external payable override onlyAuth { uint256 length = _targets.length; require( length == _datas.length && length == _values.length,
"OpsProxy: Length mismatch" );
```

```
for( uint256 i; i < length; i++ ) _executeCall( _targets[i], _datas[i], _values[i] ); }
```

...

To do so, you will need to create a task with your `dedicatedmsg.sender` as the target contract address.

Get your `dedicated msg.sender`

Copy the address of your `dedicatedmsg.sender` which can be found in the user drop-down.

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Create a task calling your `dedicated msg.sender`

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Paste the ABI below into the ABI field and select `batchExecuteCall` as the function to be automated.

...

```
Copy [{"inputs":[{"internalType":"address[]","name":"_targets","type":"address[]"},
{"internalType":"bytes[]","name":"_datas","type":"bytes[]"},
{"internalType":"uint256[]","name":"_values","type":"uint256[]"}],"name":"batchExecuteCall","outputs":
[],"stateMutability":"payable","type":"function"}]
```

...

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You can either predefine the arguments or have a resolver return the data.

If you are using a resolver, you must return an ABI encoded payload of the `batchExecuteCall` function.

Here is an example resolver that returns a payload that calls `increaseCount` on 2 different contracts.

...

```
Copy interface IOpsProxy { function batchExecuteCall( address[] calldata targets, bytes[] calldata datas, uint256[] calldata values
) external payable; }
```

```
interface ICounter { function increaseCount( uint256 _amount ) external; }
```

```
contract BatchExecCallResolver {
```

```
    address public immutable counter1; address public immutable counter2;
```

```
    constructor( address _counter1, address _counter2 ) { counter1 = _counter1; counter2 = _counter2; }
```

```
    function checker() external view returns( bool canExec, bytes memory execPayload ) { address[] memory targets = new address[2];
    targets[0] = counter1; targets[1] = counter2;
```

```
    bytes[] memory datas = new bytes[2]; datas[0] = abi.encodeWithSelector( ICounter.increaseCount.selector, [1] );
    datas[1] = abi.encodeWithSelector( ICounter.increaseCount.selector, [2] );
```

```
    uint256[] memory values = new uint256[2]; values[0] = 0; values[1] = 0;
```

```
    bytes memory execPayload = abi.encodeWithSelector( IOpsProxy.batchExecuteCall.selector, [targets, datas, values] );
```

```
    return( true, execPayload ); }
```

...

