

# Grant allowances

Building a smart contract dapp that enables users to request a fee grant is a challenging task since all transactions necessitate the payment of transaction fees. However, there are several methods that can be utilized. Here are a few examples:

- The granter can manually execute each fee grant allowance transaction using `theseecretcli`
- Construct a deployment script containing addresses that you wish to assign a fee grant to. This script will utilize `theseecretcli`
- to perform the fee grant transaction for each specified address.
- Implement a simple frontend application that verifies and validates a user's account. After confirming that they are the account owner, the application would execute a Javascript transaction with `secret.js`
- to carry out the fee grant transaction.
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Create allowance using `secretcli`

`Theseecretcli` is a key tool for accessing the fundamental functionalities of the Archway Blockchain. To install `secretcli`, refer to [Install](#). Here is an illustration of a typical transaction for creating a grant allowance:

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```
Copy secretclitxfeegrantgrant"granter_address""grantee_address" --chain-id"secret-4" --spend-limit1000000uscr\ --
expiration2025-12-31T23:00:00Z\ --allowed-messages'/secret.compute.v1beta1.MsgExecuteContract'
```

...

Let's break down a few of the components:

- `granter_address`
- : This value represents the address of the account providing tokens to the grantee
- for transaction execution.
- `grantee_address`
- : This denotes the account receiving tokens, enabling it to perform transactions using these grants.
- `allowed-messages`
- : Through the `AllowedMsgAllowance`
- type, you can limit the message type a grantee can use the grant for. If not specified, all messages are allowed.
- `expiration`
- : The deadline by which the allowance must be used or it will expire.
- `spend-limit`
- : The maximum allowance provided to the grantee. This amount is adjusted as tokens are utilized.
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Create allowance using `secretjs`

This section demonstrates how to create a grant allowance using `secretjs`. By following the steps outlined in this section, you'll be able to structure a grant allowance message, and execute the necessary transaction which will grant allowances to designated accounts.

1. The allowance message comprises three essential components: the granter
2. , grantee
3. , and the actual allowance
4. . As previously mentioned, the granter
5. is the address responsible for granting the allowance, while the grantee
6. is the recipient who can utilize the granted allowance. The allowance
7. component is slightly more intricate, with its structure dependent on the specific type of allowance employed.
- 8.

To illustrate, let's examine the structure of `agrantMsg` using the following example:

...

Copy `const address = "secret1..."` // the address you like to send the Fee Grant to `const faucetAddress = "secret1..."` // address of your own faucet

```
const grantMsg = new MsgGrantAllowance({ grantee: address, granter: faucetAddress, allowance: [ spend_limit: [ {
amount: "1000000", denom: "uscr", }, ], }, })
```

...

1. Now, all that remains is to execute the transaction:
- 2.

...

Copy `constmemo="Your custom memo here" constgasLimit=18000//recommended amount, if you see gas limit errors, increase this. constgasPriceInFeeDenom=0.5//means: 0.5 usrt/gas unit`

```
consttx=awaitsecretjs.tx.broadcast( msgs, { memo:memo, broadcastCheckIntervalMs:100, feeDenom:"usrt",
gasPriceInFeeDenom:gasPriceInFeeDenom, gasLimit:gasLimit, broadcastMode:BroadcastMode.Block, }, )
```

...

You can find a working example of this in the Fee Grant Faucet [here](#) .

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