

Shielded IBC

You can send assets to another IBC compliant chain, such as a Cosmos SDK chain or another Namada chain, using the `ibc-transfer` command in `namadac`.

This section covers sending assets to and from a shielded (`znam`) address.

Prerequisites

- An active IBC connection has been created and maintained between the two chains by operators running relay
- software such as [Hermes](#) ([opens in a new tab](#))
- .
- You will need to know the corresponding channel id

IBC transfer to a shielded address

Before sending your IBC transfer, you will need to generate a MASP

Before `namadac ibc-transfer`, you need to generate a proof of the following IBC transfer for the shielding transfer to the destination Namada. The command `namadac ibc-gen-shielded` generates the proof and outputs a file including required data. In this case, Chain B is the destination chain.

```
namadac
```

```
--base-dir {BASE_DIR_B} ibc-gen-shielded \ --output-folder-path {OUTPUT_PATH} \ --target {payment_addr_b} \ --token
```

```
apfel \ --amount
```

```
100 \ --port-id
```

```
transfer \ --channel-id
```

```
channel-0 \ --node {LEDGER_ADDRESS_B}
```

 Then, you can send the token from the source chain by setting the proof in the ICS-20 packet's memo field. The following example is to send tokens from the source Namada (Chain A). The `{memo_path}` should be the file path created by `namadac ibc-gen-shielded` on the destination chain.

```
namadac
```

```
--base-dir {BASE_DIR_A} ibc-transfer \ --source {spending_key_a} \ --receiver {payment_addr_b} \ --token
```

```
apfel \ --amount
```

```
100 \ --channel-id
```

```
channel-0 \ --memo-path {memo_path} \ --node {LEDGER_ADDRESS_A}
```

 When the source chain is a Cosmos-SDK based chain, the memo should be set as string with `--memo` option.

memo

```
( cat {memo_path} ) | gaiad
```

```
tx
```

```
ibc-transfer
```

```
transfer \ {CHANNEL_ID} \ {RECEIVER_PAYMENT_ADDRESS} \ {AMOUNT} {IBC_TOKEN_ADDRESS} \ --from  
{COSMOS_ALIAS} \ --memo {memo} \ --node {COSMOS_RPC_ENDPOINT} \ --fees
```

```
5000 uatom
```

 You can do unshielding transfers over IBC without generating a proof.

```
namadac
```

```
--base-dir {BASE_DIR_A} ibc-transfer \ --source {spending_key_a} \ --receiver {RECEIVER_RAW_ADDRESS} \ --token
```

```
nam \ --amount
```

```
100 \ --channel-id
```

```
channel-0 \ --node {LEDGER_ADDRESS_A}
```

[IBC transfers Transparent IBC](#)