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Learn how to connect chains and how to use CosmJS for the Cosmos SDK

**Introduction to IBC and CosmJS**

Ever wondered how cross-chain communication is possible? Get a fast introduction to the world of the **Inter-Blockchain Communication Protocol (IBC)**.

You will learn more about the transportation, authentication, and ordering layer of IBC and take a deeper dive into how token transfers between chains become possible. Finally, you will take a more detailed look at relaying with IBC.

You will also learn about CosmJS, the TypeScript library for the Cosmos SDK. With step-by-step examples, you will learn how to work with CosmJS when building your application-specific blockchain.



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In this chapter, you will:

* Learn about **IBC**:
  + Discover what IBC is.
  + Get an introduction to the different layers of IBC and how connections, channels, and clients relate to each other in IBC.
  + Take a look at IBC token transfers.
  + Explore interchain accounts.
  + Dive into relaying with IBC.
  + Get an overview of helpful tools for IBC.
* Learn about **CosmJS**:
  + Discover what CosmJS is.
  + Learn how to load CosmJS and Stargate into your projects.
  + Learn how to interact with a Cosmos blockchain using the existing methods of CosmJS.
  + Learn how to interface with the Keplr wallet in the browser.
  + Learn how to create new CosmJS methods so your users can query your specific module and blockchain.



This chapter covers quite a lot of content that goes very deep into the intricacies of IBC. Please be aware that the recommended **essentials** for IBC are:

* [What is IBC?](https://ida.interchain.io/academy/3-ibc/1-what-is-ibc.html)
* [IBC Token Transfer](https://ida.interchain.io/academy/3-ibc/7-token-transfer.html)
* [IBC Tooling](https://ida.interchain.io/academy/3-ibc/12-ibc-tooling.html)

The sections on [IBC/TAO connections, channels, and clients](https://ida.interchain.io/academy/3-ibc/2-connections.html), [Interchain accounts](https://ida.interchain.io/academy/3-ibc/8-ica.html), and [IBC middleware](https://ida.interchain.io/academy/3-ibc/9-ibc-mw-intro.html) are optional and **NOT** final exam relevant. They are made available only in case you want to dive deeper.

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First, begin with an [introduction to IBC](https://ida.interchain.io/academy/3-ibc/1-what-is-ibc.html), then you can go ahead an head to the section on [fungible token transfers](https://ida.interchain.io/academy/3-ibc/7-token-transfer.html). After getting an [overview on helpful tools for IBC](https://ida.interchain.io/academy/3-ibc/12-ibc-tooling.html), you can start your ComsJS journey with an [introduction section](https://ida.interchain.io/tutorials/7-cosmjs/1-cosmjs-intro.html).

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Cosmos SDK

**Cosmos SDK**

A framework to build application-specific blockchains

[Documentation↗](https://docs.cosmos.network/)

CometBFT

**CometBFT**

Blockchain consensus engine and application interface

[Documentation↗](https://docs.cometbft.com/)

Cosmos Hub

**Cosmos Hub**

First interconnected public blockchain in the Interchain network

[Documentation↗](https://hub.cosmos.network/)

IBC

**IBC**

Industry standard protocol for inter-blockchain communication

[Documentation↗](https://ibc.cosmos.network/)

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