

# BLOCKCHAIN

TECHNOLOGY

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**CMMIDEV /3<sup>SM</sup>**  
Exp. 2020-01-13 / Appraisal #28491

**ISO 9001:2015**

Helping customers shorten the development life cycle  
**Grow. Streamline. Strengthen**

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## **Introduction**

- Review & Recap
- Platform Overview

## **Use Case Implementation**

- Problem statement definition
- Designing Data Models, Assets, Participants & Transaction Types
- Defining the business rules
- Implementing Chaincode
- Testing Application

## **Conclusion**

- Common Pitfalls & Consideration
- Learnings from Experience
- Open Agenda

# Introduction

Review & Recap

Hashing

Ledger

Consensus

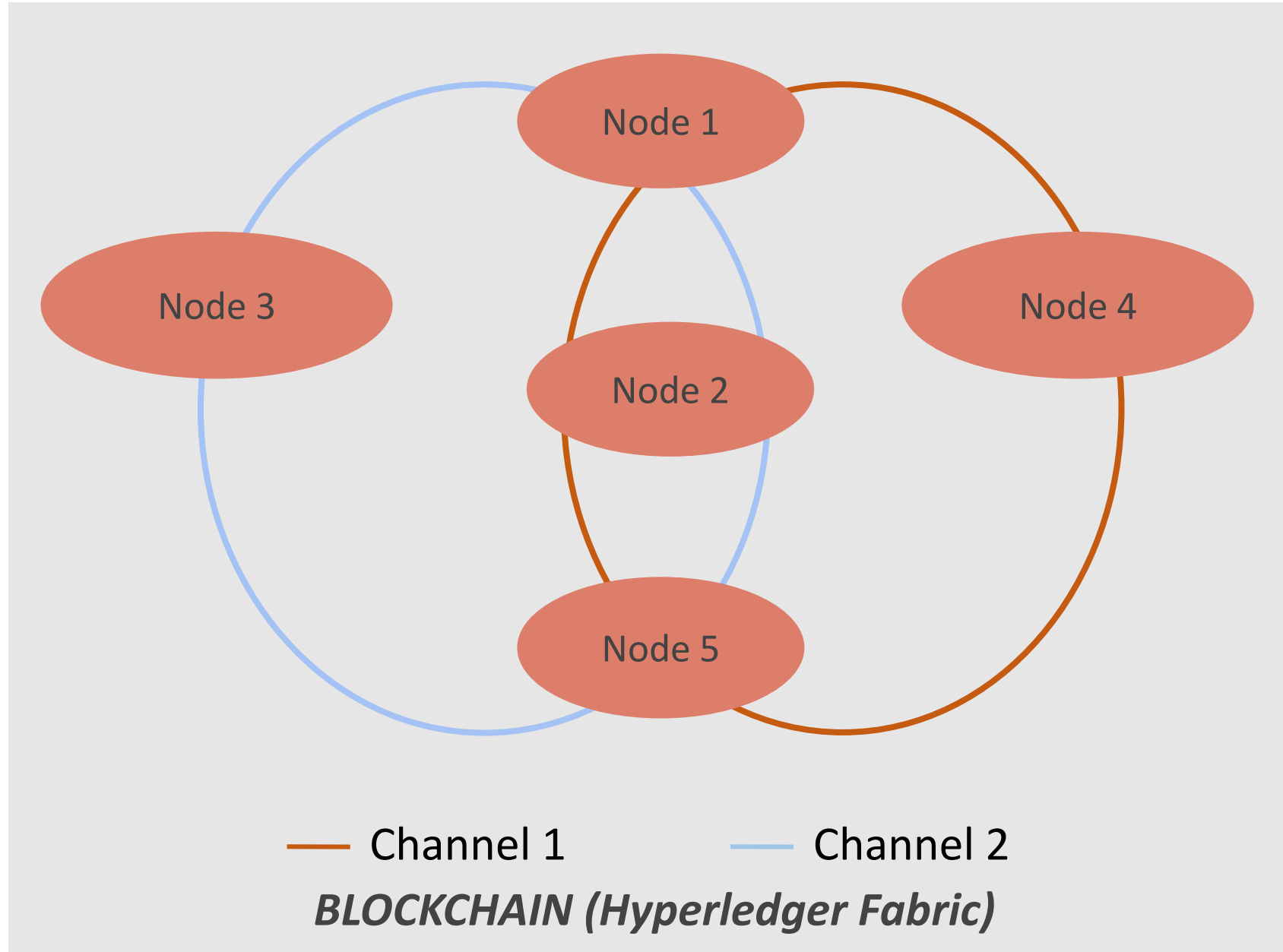
Types of Blockchain

Organizations

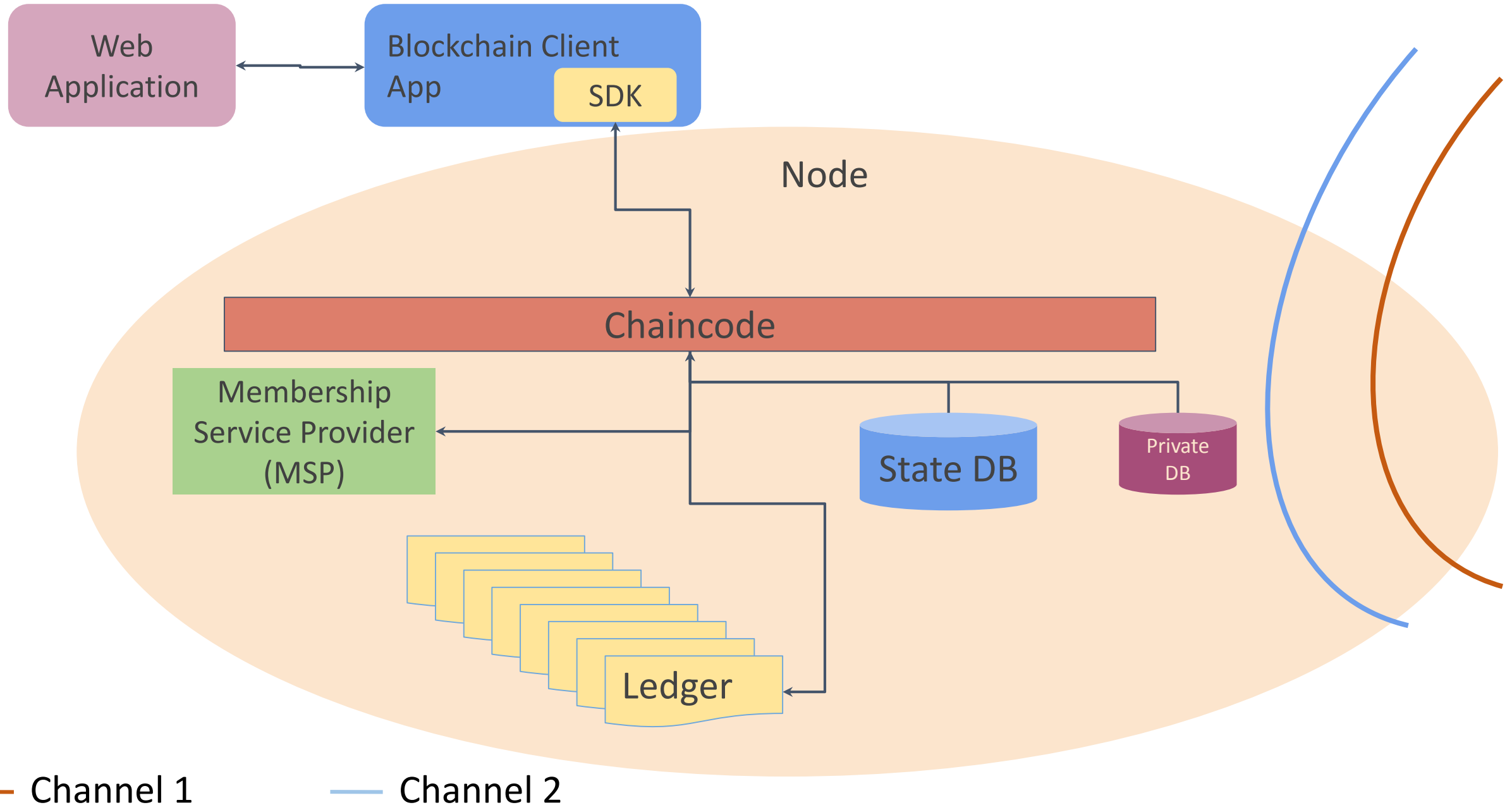
Peers / Nodes

Channel

Types of Nodes



# Typical Solution Architecture



Web Application

Blockchain Client  
App

Chaincode

Angular JS Application

Node JS

Go

Java (Spring / Struts)

Java

Node JS

PHP

Go

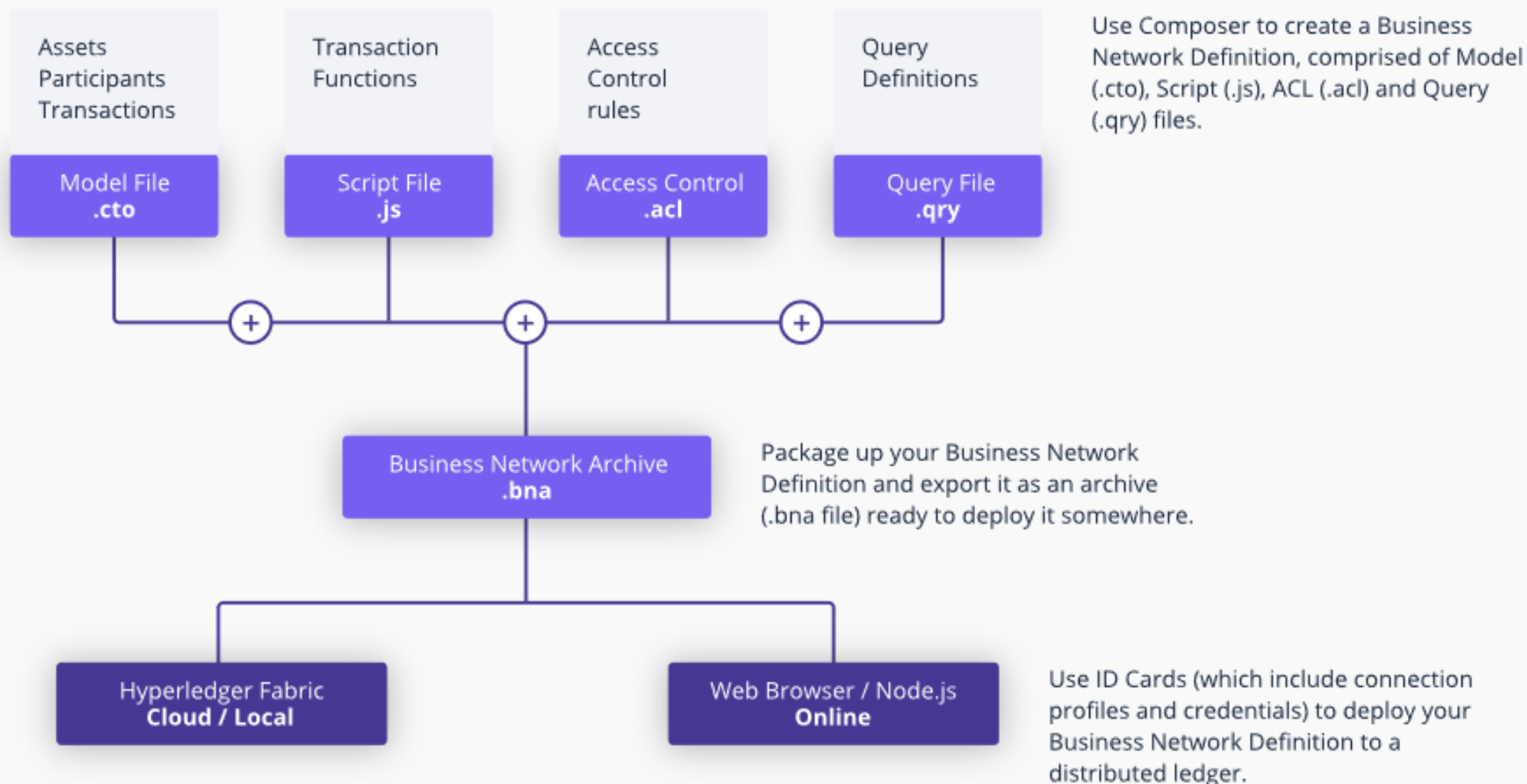
Java

HTML / JS

Javascript



# Typical Composer Implementation



# Use Case

Vehicle Insurance Processing

Multiple application for a single vehicle

Multiple claims for single incident

Wrong claims due to negligence of owner

Delay in processing due to FIR availability & Authenticity

## **Assets:**

Claim Application

## **Participants:**

Vehicle Owner

Police

Insurance Company

## **Transactions:**

Claim Application

Claim approval – Police

Claim approval – Insurance Company

Claim Closure

## **Business Rules:**

- Claim application should not be allowed to submit multiple times for a vehicle
- Once police action is done, another police should be able to act on it, Similarly for insurance company
- Insurance company cannot approve without police approval
- Should not be able to act upon an already closed application

# Conclusion

Pitfalls, Consideration

- Do not enforce blockchain where it is not required.
- Do not design a blockchain solution like you would do a traditional server based solution, think distributed.
- Remember that blockchain is **NOT** a solution to all the problems being faced.
- Do not go big bang into implementation
- Do not create a currency until it is absolutely necessary

- State and set specific business challenges that are to be solved by blockchain
- Permissioned vs Un-Permissioned
- On-chain vs Off-Chain
- Cloud Platforms vs On Premises
- Smart Contract Rules
- Be cautious of the 3rd party integrations

- Write Deterministic Chaincode
- Use Chaincode Logging
- Avoid using Global Keys
- Remember to Set Chaincode Execution Timeout
- Refrain from Accessing External Resources



# 10 Things blockchain is not

- Blockchain is not Bitcoin:
- Blockchain is not (yet) mature
- Blockchain is not a product
- Blockchain is not needed when there is no business network
- Blockchain is not a transaction processing system replacement
- Blockchain is not a distributed database replacement
- Blockchain is not a secure messaging replacement
- Blockchain is not just about currency
- Blockchain is not usually suited for high volume, low value transactions
- Blockchain is not (necessarily) anonymous



# Questions??



# Thank You



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**company overview**



## Integra Micro Systems

**Integra Micro Systems** is the flagship & parent company of Integra group. It is a leading provider of innovative & high technology products for Government, BFSI & Telecom space.



**1982**

Established



**10**

locations  
across India



**400+**

employees



**50+**

Copyrights in  
Communications,  
Office Automation,  
Embedded, imaging

## Business Sectors



BFSI



eGovernance



Distribution



Biometrics



Field Agents

# Integra Micro Software Services



An Integra Group Company

## WHO ARE WE

IMSS is a leading software services company with the right mix of technology, resources, processes & innovation.

## OUR PURPOSE

Helping customers shorten their development life cycle

**250+**

Employees  
(225+ Developers)

**15**

million man hours  
saved for our clients

**4**

active regions  
around the world



**CMMI DEV/3<sup>SM</sup>**  
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**ISO 9001:2015**

**ISO 27001:2013**

**Grow . Streamline . Strengthen**  
with IMSS



# CORNERSTONES

People  
Quality  
Delivery  
Processes  
Leadership

**2004**

IT Consulting

Quality Assurance

**2005**

Application Development

Life cycle Maintenance

Reengineering

**2009**

Consulting

Enterprise Solutions

Telecom VAS

**ISO 9001:2008**

**2013**

Mobile Financial Services

Mobility

**2014**

FinTech


BPM

L1 & L2 Support

**2016**

IoT

MADP

 **CMMI DEV/3**  
Exp. 2020-01-10 / Appraisal #28491

**2018**

ChatBOT & RPA

Blockchain

Machine Learning

**ISO 9001:2015**

**ISO 27001:2013**

**250+ employees**

**15 million person hours saved for our clients**

Our History of Rapid Transformation

Helping customers shorten the development life cycle  
**Grow. Streamline. Strengthen**  
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To learn more about our service offerings, please contact our business team at [business@imss.work](mailto:business@imss.work), or visit: [imss.work](http://imss.work)

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IMSS is a leading provider of software services specialising in BPM & RPA, Enterprise Mobility, FinTech & Blockchain, BOTs & Machine Learning, Testing and Outsourcing services. With a strong track record across these domains, proven expertise and knowledge, we are an ideal partner for technology and solutions development.



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**Faster Turnaround Time**



**Customer First**  
No Matter What



**Skill Mix & Match**



**Learning & Agility**



**Customer Delight**  
Not just Satisfaction



**Domain Expertise**



**Evolved Processes**

