Hyperledger Blockchain Career Fair 2024

Session I - Blockchain Career Tips

Thurs, April 25th, 12:00 pm ET

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BLOCKCHAIN TECHNOLOGIES FOR BUSINESS

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BLOCKCHAIN TECHNOLOGIES FOR BUSINESS

Career Fair Session 1 Agenda

- Hyperledger Blockchain Career Fair Overview (5 m)
- Basic Blockchain Glossary (DLT, smart contracts, app scenarios) (15 m)
- Hyperledger Blockchain Community: (15 m)
    - Projects, Resources, Support channels & teams, Education resources
- Key Business use cases and solutions by industry (10 m)
- Blockchain Career Roles: Q & A (40 m)
- Summary and optional Homework, related materials and links (5 m)

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Hyperledger Blockchain Career Fair Overview

- BCEMPLOY - free program on Blockchain Career opportunities
- reviews ideas for careers in the blockchain with focus on Hyperledger
- 2 online sessions to attend
- optional Homework assignments
- looks at Hyperledger blockchain technologies and community
- Beyond Technical roles there are opportunities in other roles too:
- Project Management, Product Management, Consulting, QA, Infrastructure, Support, Training, Business Analysis, Compliance
- if you have blockchain skills, great
- if you don't have blockchain skills, great
- if you are motivated to learn and work hard, great

Session 1 - Blockchain Career Prep

Session 1 Covers:

- Hyperledger Blockchain Career Fair Overview
- Some Basic Blockchain Concepts (DLT, smart contracts, app scenarios)
- Hyperledger Blockchain Community:
    - Projects, Resources, Support channels & teams, Education resources
- Key Business use cases and solutions by industry
    - (defi, digital assets, refi, supply chain, mobi, govt, healthcare, mfg,)
- Blockchain Career Question and Answer
- Summary and optional Homework, related materials and links

Homework (Optional) - checklist of self-guided tasks

- Choose the topics you want to learn from the list
- Access your education resources
- Track your work with the online forms

Session 2 - Blockchain Career Job Fair

Session 1 Covers:

- Leading companies and recruiters working with Blockchain technologies are available at the career fair in breakout rooms

- Companies will
    - Summarize their business and operating models, and highlight any public projects.
    - Provide insights on the roles within their organization and the skills they focus on.
    - Discuss how to register for their talent pool and/or apply for specific roles.
    - Answer questions and provide guidance on next steps.

Basic Blockchain Glossary

Blockchain
DLT
Public Permissionless vs Private Permissioned
Identities
SSI
VC
Consent Mgt
Smart Contract
Encryption methods
Digital Signatures
Digital Wallets
Tokens

blockchain-glossary-jim-mason - Google Sheets.pdf

Trust Fuels the World

Automated Digital Trust

Is Blockchain New? World's First Blockchain Prototype

Archeologists discover the world's first blockchain in Egypt
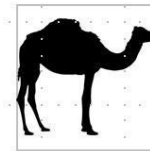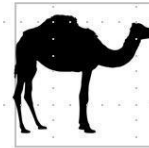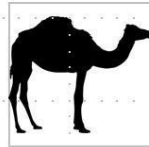
Amir and Omar agree

To trade a bushel of wheat for a gold coin

And record the sale on 2 clay tablets encrypted in hieroglyphics and attested by the Pharoah's vizier (a smart contractor)

And distributed over a camel network

as immutable data for 5000 years

Blockchain (DLT) = trusted, shared data

- **Peer Network -**
  host organizations: each maintain a copy of
  shared ledger in synch using smart contracts

- **Immutable, shared ledger -**
  Hash chain of write-only transaction blocks
  ordered by date replicated on host organizations

- **Smart contract -**
  secured program implements a contract between
  parties to validate, write transactions on the ledger
  with event support

- **Consensus method-**
  policies define how transactions are approved,
  posted to the ledger

- **Governance services** to manage the network
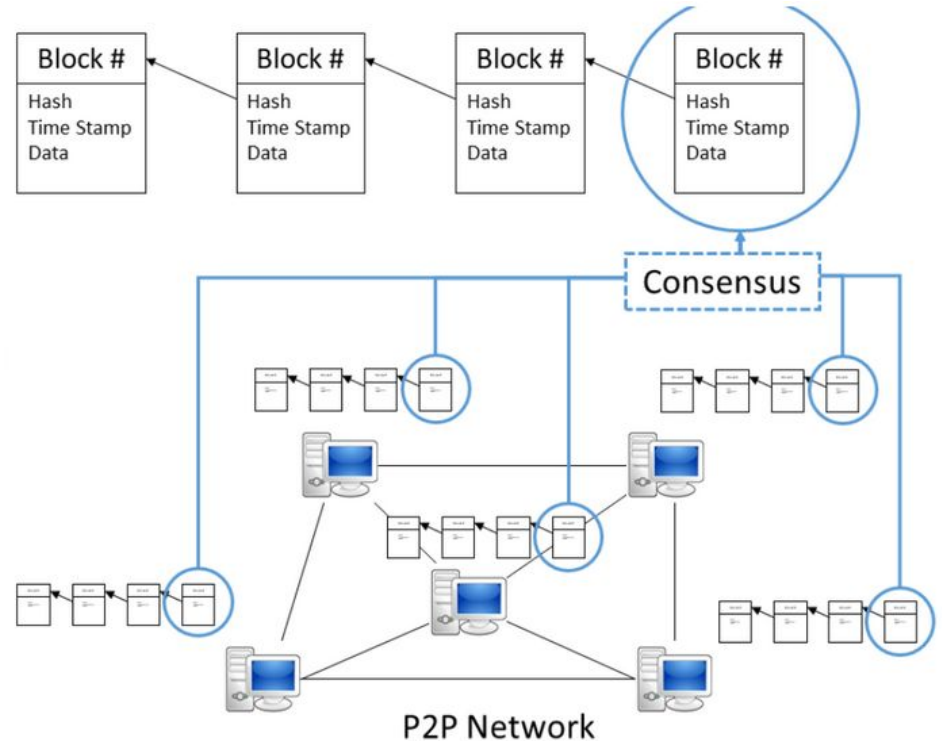
Smart Contracts & Transaction Consensus

- **Smart Contracts**
  - All host orgs have same contracts, shared ledgers
  - Contracts define business rules
  - Client app invokes contract method (buyItem..)
  - Contract execution creates transaction on hosts >>
    - Transactions processed on consensus flow
  - Apps can receive commit event for automation
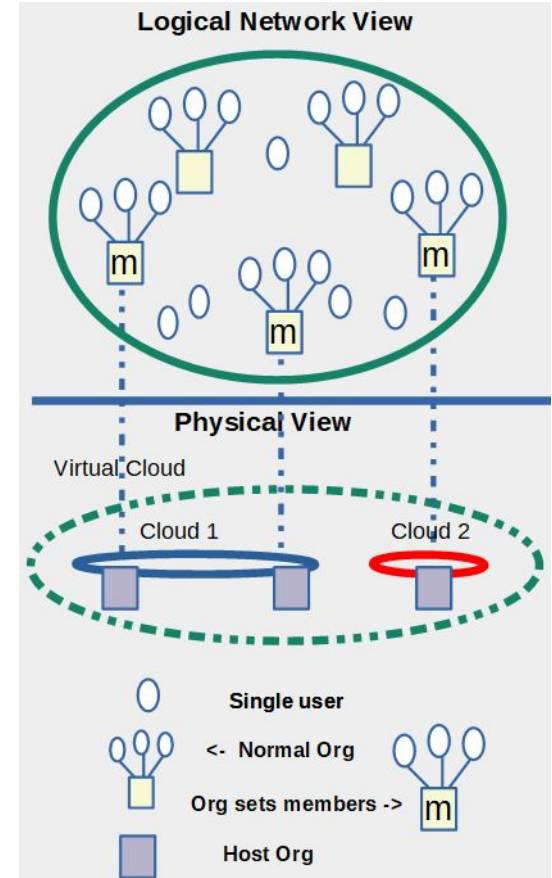 - Contracts automatically governed in Fabric v2x

- **Contract Transaction Consensus Process**
  - Flexible consensus methods & policies
  - Contract execution creates transaction results
  - Hosts decide if transaction is valid
  - Hosts agreement based on consensus policy
  - If agreed, transactions ordered in blocks
  - Ordered transactions commited to ledgers
  - transactions stored on ledgers

Application Developer Identity

Application

Run smart contracts

Receive ledger updates

Smart contract

ledger

Blockchain Logical vs Physical Network

- Blockchain **networks with only a few organizations**

  - Every organization may be a host on the network and the network can perform well

- Blockchain **networks with many organizations**

  - A logical blockchain network may be created where:

    - A few large host organizations run the physical blockchain network of nodes

    - Many participant (Normal) organizations, users join the network but do not host it. Gray nodes are the blockchain host nodes.

    - Host organizations here set membership for all participants in logical network view (other users, organizations)

    - Green circle ("virtual cloud") contains physical clouds (1, 2)

    - An example would be OEM auto manufacturers and car dealers. A few OEMs host thousands of car dealers.

      - OEMs might host nodes on the network
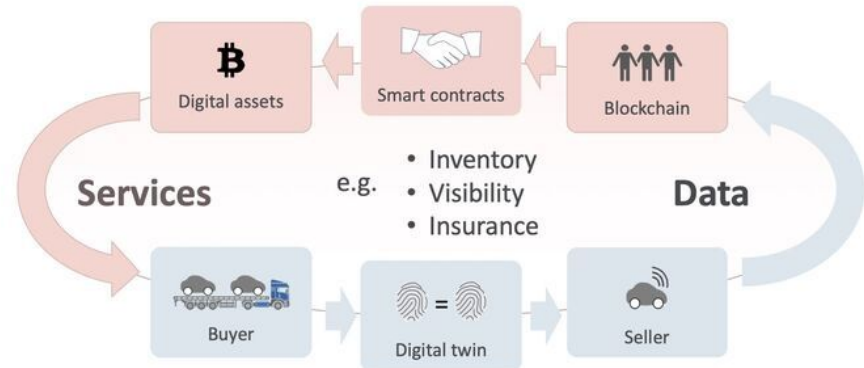   - Dealers join as members but don't host

Logical Network View

Physical View

Virtual Cloud

Cloud 1   Cloud 2

○ — Single user

○○○ <- Normal Org

Org sets members -> [m]

[ ] Host Org

Trusted data with consent management is very big market

Use Case:

- Trusted Data Marketplace

- **Andy Martin, IBM, Value Design Leader**
  Linkedin

- blockchain - there will be a market for buying an
  selling of the new asset of trusted data at the le
  of the market to which one can differentiate by
  adding unique, private data and capability

- We already know there is a market value for dat
  Add trust and consent management on top and
  value for data increases

Next gen. digital business

| Digital assets | Smart contracts | Blockchain |

Services — e.g. • Inventory • Visibility • Insurance — Data

| Buyer | Digital twin | Seller |

Token Economy = blockchain, contracts, tokens

Use Case:

- Token Economy Model
- **Andy Martin, IBM, Value Design Leader**

  Linkedin
- Digital identities defined for parties (people, orgs, devices)
- Blockchain – provides shared, trusted data on a network
- Smart contracts automate execution of processes for digital assets, identities
- Digital assets can be tokenized for easy ownership or usage transactions

Token economy

Digital Asset	Security Utility Money	Tokenisation assigns ownership rights
Smart Contract		Process codifies & automates trading of digital assets
Blockchain		Shared, trusted & distributed source of the truth

Engineering key for Value Chain Economies (VCE)

Value Chain Economies (VCE)

DAO evolved = VCE
Stakeholder roles operating in virtual community
Measure Value, Costs, Risks, Success Keys
>> security, trusts, data, events, decisions, **rules**

Value Chain Engineering is a continuous process:
Value streams -> strategies -> capabilities -> solutions

Pain points Capability & Product Assessments answer:

1. Solution right for capability use case?
2. Enterprise ready?
3. Where to invest in solutions?
4. Where solutions overlap?
5. Reuse opportunities?
6. Maturity level of solutions?
7. What gaps exist for solutions?
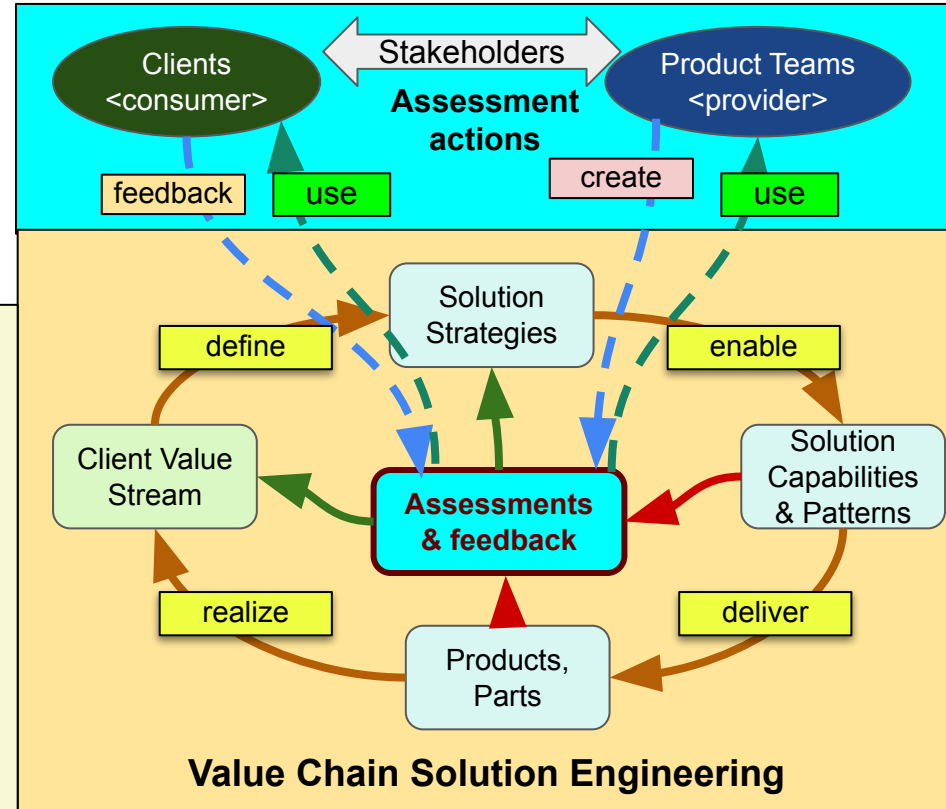
Identity and Trust Evolve

Most organizations now

improvement opportunity

Siloed Identities

1995

Challenges

- Duplication of Data
- Out-of-date data
- Transaction Complexity
- Multiple Identity
- Privacy Risks

Federated Identities

2012

Challenges

- Identity Theft
- Data Breaches
- Cyber security risks
- Costly process

**Self-Sovereign Identities**

2020

Why Blockchain for SSI

- No single point of failure
- Cryptographically secure
- Digitally verifiable credentials
- Immutable transactions

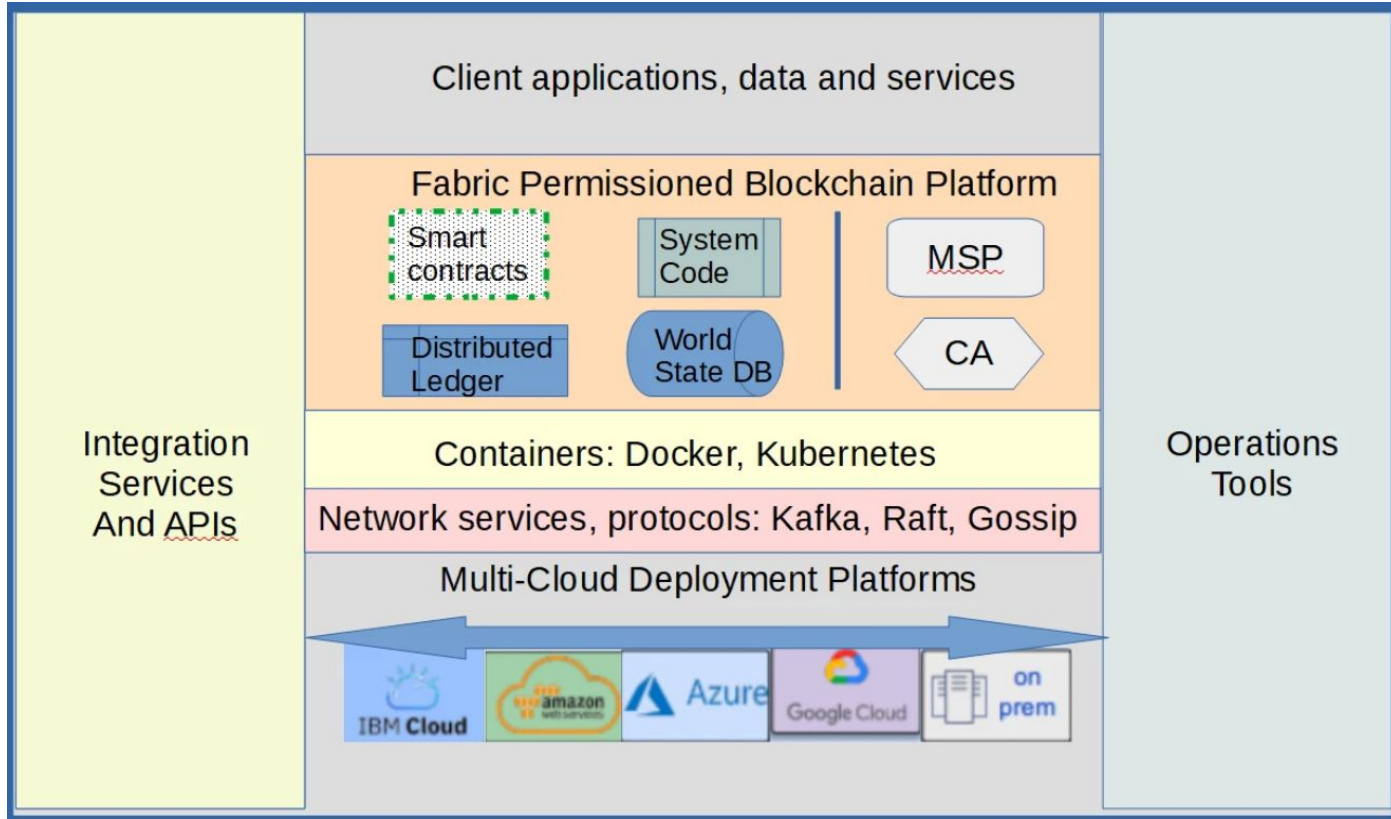How user-controlled
digital identity works
With blockchain
Video link

The Original Triangle of Trust - documents

- Issuers are the source of credentials—every credential has an issuer.

- Holders request credentials from issuers, hold them in their wallets or filing cabinets, present them when requested by verifiers (and approved by the holder).

- Verifiers can be anyone seeking trust assurance about the holder of a credential. Verifiers request the credentials they need and then follow their own policy to verify their authenticity and validity
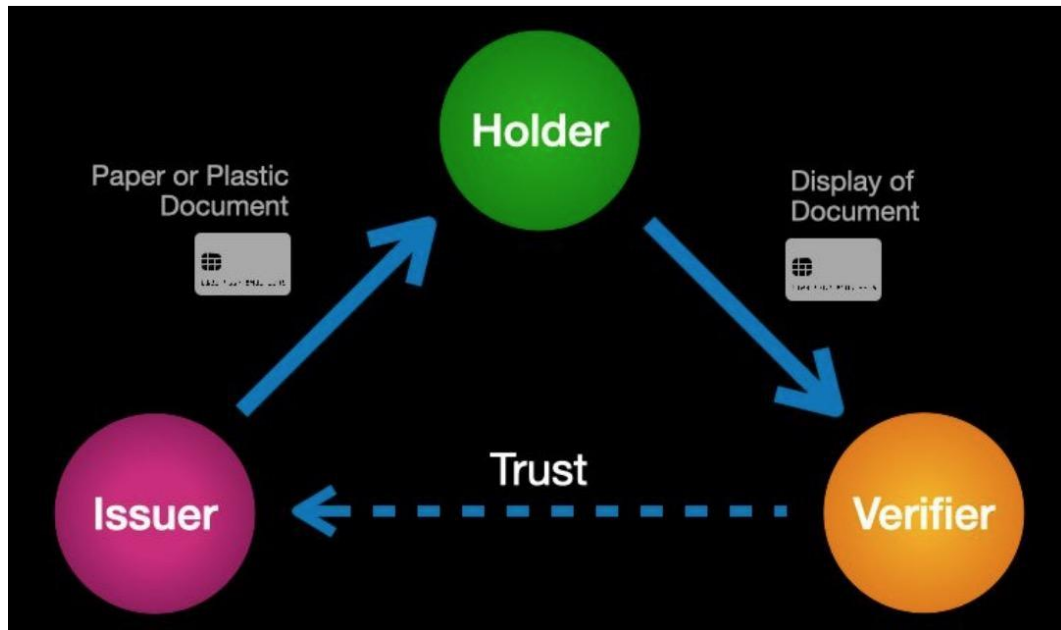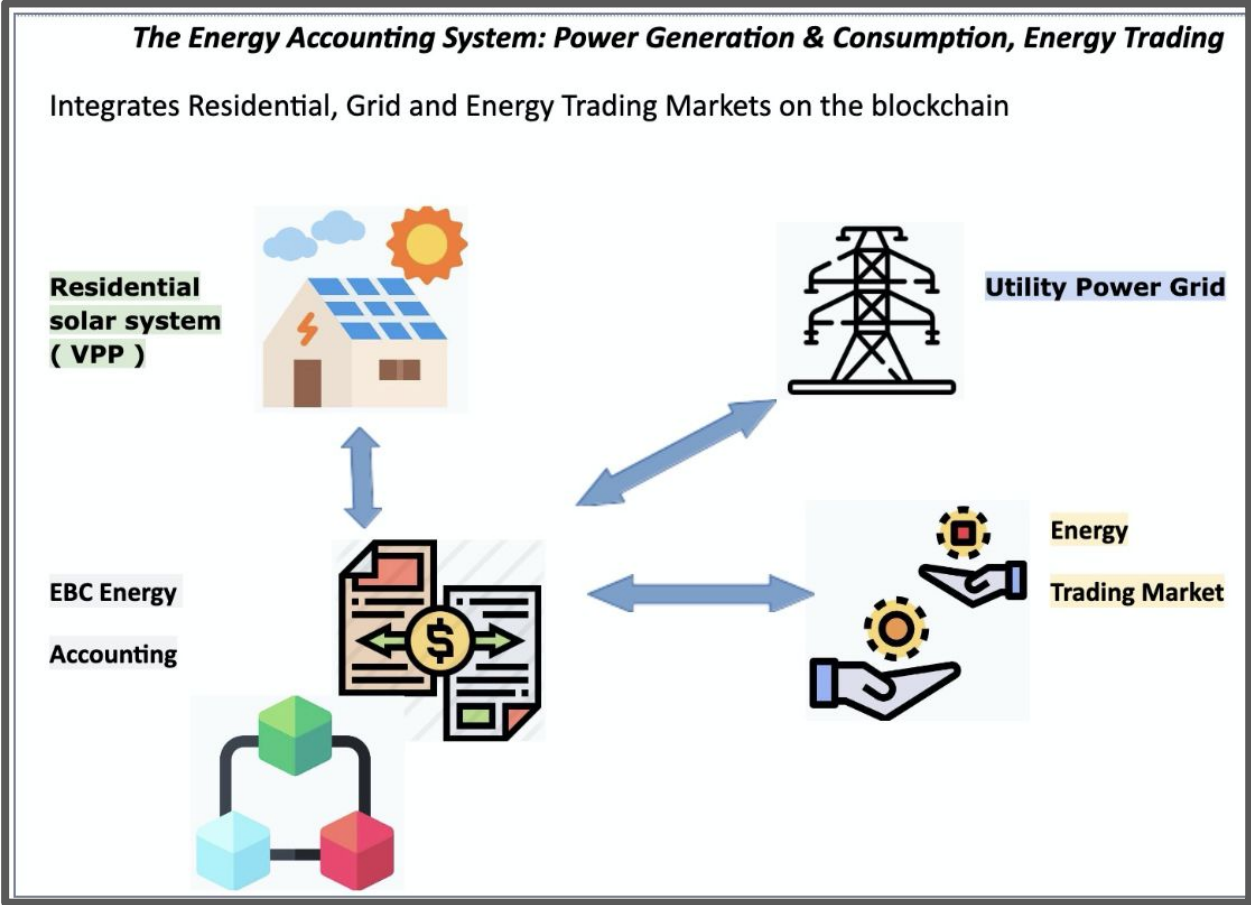
Conceptual Hyperledger Fabric Software Stack

Jim Mason – Sky Web Team @2020

Example - Use Case: Carbon Trading Market

Use Case Diagram

Shows P2P energy trading use case

The Energy Accounting System: Power Generation & Consumption, Energy Trading

Integrates Residential, Grid and Energy Trading Markets on the blockchain

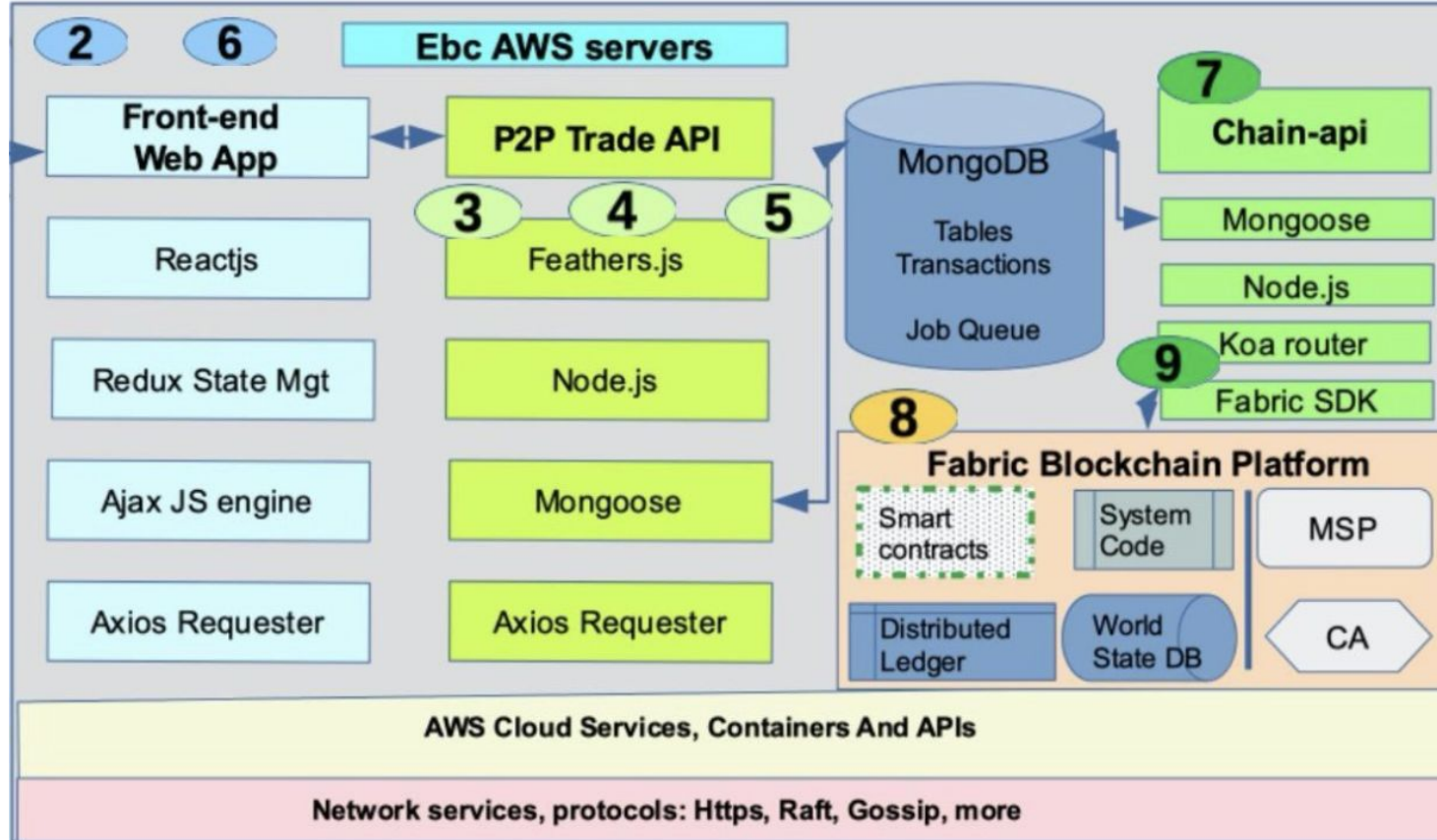Residential solar system (VPP)

Utility Power Grid

EBC Energy Accounting

Energy Trading Market

Example - Architecture Diagram: Carbon Trading Market

Architecture Diagram w Hyperledger Fabric
Activity diagram maps to actual code

Hyperledger Blockchain Community

Hyperledger Site Resources

Hyperledger Organization Links

Hyperledger Org Home Page
https://www.hyperledger.org/

Hyperledger Projects Page
https://www.hyperledger.org/projects

Hyperledger Github Repos
https://github.com/hyperledger

Hyperledger Discord Channel
https://discord.gg/hyperledger

Developer Weekly Newsletter
https://www.hyperledger.org/developer-newsletter

Hyperledger Training Resources

https://www.hyperledger.org/learn

https://www.hyperledger.org/case-studies

https://www.hyperledger.org/use/tutorials

https://www.hyperledger.org/learn/training

https://www.hyperledger.org/learn/training#certifications

Hyperledger Wiki - many resources, projects, groups

Hyperledger Wiki
https://wiki.hyperledger.org/

Hyperledger Community Calendar

Hyperledger Community Meetups
https://www.meetup.com/pro/hyperledger/

Hyperledger Youtube Channel

Key Business use cases and solutions

Hyperledger Use Cases

Hyperledger Case Studies available

https://www.hyperledger.org/case-studies/page/1

https://www.hyperledger.org/case-studies/page/2

https://www.hyperledger.org/case-studies/page/3

https://www.hyperledger.org/case-studies/page/4

https://www.hyperledger.org/case-studies/page/5

Organizations using Hyperledger

Fidelity
Citi
Swift
Walmart
GSBN
British Columbia
State of Rhode Island
Farm2Plate.io
Honeywell

Others using Hyperledger Technologies

Others Using Hyperledger

Partners Healthcare
IBM
Accenture
Infosys
DTCC
Deloitte
BurstIQ
Kaleido
Indicio
… more

Hyperledger Solutions I worked on

Sybal.io automated Proof of Governance
State of Rhode Island Digital Identity MVP
DMX Auto Trading Market MVP
Paramount - P2P Energy Trading Market MVP
Paramount - Carbon Credit Trading Market MVP

Other Blockchain Use Cases

Ethereum Case Studies - Consensys .

Trust Your Supplier - Chainyard

Bank of Korea CBDC

EIB Digital Bonds

Master Card Ethereum Rollups

Komgo Trade Finance

Dubai Smart City

MOBI Vehicle identity

Savimbo Fair-Trade Climate Credits

Blockchain Career Roles: Q & A

1. Demand for blockchain related skills & roles

2. How companies define roles and opportunities

3. Resume and cover letter concepts

4. How people build their skills, brand for roles

5. How companies find candidates

6. How the hiring process is managed

7. Tips for the first 90 days on a new team

Demand for blockchain related skills and roles

blockchain-council.org
"demand for skilled **Blockchain professionals**
is on the rise"

simplilearn.com
"being a blockchain developer is a smart choice"

dappuniversity.com
"opportunity to earn a high 6-figure income as a
blockchain developer."

Job sites with blockchain, DLT info

Linkedin has 2770
Indeed.com has 1665
Dice.com has 147
Other sites
Corporate sites
Talentify

Top 10 US IT companies

How companies define roles and opportunities

Workforce Planning

- HCM - Human Capital Management software
- Well run organizations have 5 year strategic and 1 year tactical plans updated annually
- Both planned and unplanned work shows up
- Planned work may use existing staff
- Planned work may allow retraining staff
- Unplanned work or new types of work
- Often partner with external consulting firms
- Consultants provide key skills and temporary capacity for unplanned work

Workforce Sourcing

- Internal employees reallocated
- Internal employees retrained
- Define temporary contract roles to source
- Define permanent roles to source
- Use staffing tools: job sites, firms, recruiters

Resume and cover letter concepts

Resume
- Should be relevant for the role
- Different formats possible
- Key is will it scan with ATS?
- ID yourself and contact info
- Summarize yourself in 1 or 2 sentences
- Can add a highlights section tailored to role
- Companies still like chronological roles
- End with education, certifications

Cover letter
- Shows your interest in the company
- Shows your interest in the role
- Highlights how you fit the role
- Should be less than 1 page clearly
- Some companies value them

Thank you letter
- Shows your appreciation for the interview
- Reference 1 or 2 key discussion points showing fit
- Ask about next steps

How people can build their skills, brand, network for roles

Skills building

- Identify key skills for roles
- Review related standards groups
- Find industry groups using blockchain
- See the blockchain learning resources at the end of this slide deck

Brand building

- Create your resume
- Create a Linkedin profile
- Join Hyperledger projects
- Join Hyperledger groups
- Join a Local Hyperledger Meetup group
- Volunteer for Hyperledger projects or other groups to build your skills, network
- Write or review articles
- Find mentors
- Search sites like Linkedin for connections at companies you are targeting
  - Warm introductions are best

How companies find candidates

Job postings internally
Internal training programs on basic concepts

Existing Resume databases (sometimes)

Recruiting firms

Employee Referrals

Job sites:
- Linkedin
- Dice.com
- Indeed.com
- Monster.com
- Talentify.com

How the hiring process is managed

Varies by company
HCM - Human Capital Management software

1. List roles internally on company sites
2. List roles externally on job sites
3. People apply on sites with resumes, cover letters
4. ATS (Applicant Tracking System) resume scans
5. (Optional) Psychometric tests for team fit
6. (Optional) Skills tests
7. HR reviews small set of passed resumes
8. (Optional) HR may do "first" screen interviews
9. HR sends a "first" set of candidates to hiring team
10. Hiring team interviews candidates
11. Hiring team decides who to extend an offer to

How companies assess candidates

● Assessments on skills, experience, team culture
● ATS - Applicant Tracking Systems
● Adding GenAI reviews of resumes as well
● Test candidates on skills (by role)
● Test candidates on team culture, personal traits
● CCAT - Criteria Cognitive Aptitude Test
● Emotify Test – The Complete Guide for 2024
● Interviews
● Employment Verifications
● Reference Assessments

Tips for the first 90 days on a new team

[The New Leader's 100-Day Action Plan - Tradepub](#)

First 90 Days on a New Team

1. ID onboarding process & mentors
2. ID your role, responsibilities, resources
3. create 100 day worksheet to start
4. ID team authorities & capabilities
5. learn communications models
6. learn team culture: good & bad
7. Ask the right questions: 5WH
8. Compare answers & feedback
9. Ask How to Help

Summary and optional Homework

Summary Thoughts on Blockchain Career Path

How to learn more about Blockchain technologies and solutions?

- Start with Hyperledger
- Many organizations and companies are building and investing here
- Many good case studies documented in different industries
- Easy access to all the software projects, tools
- Good documentation and samples
- Some courses on accreditation

Where to look for opportunities?
- Defi industry
- All traditional industries
  (Finance, Supply Chain, Manufacturing, Mobility, Healthcare, Environmental)
- Governments
- Corporate web site job listings
- Integrating Blockchain with other Web3 technologies: AI, IoT, Automation,
- Visit Hyperledger sites for the community, projects, groups, documentation and education resources
- Go to the Job Fair to learn more from the companies there

Blockchain Resources and Optional Homework

Homework

Visit the Hyperledger Sites

Research blockchain companies on linkedin

Research blockchain user profiles on linkedin

Look at eubof, inatba, gbbc, gba,

Local Hyperledger Meetup Groups

How-hire-great-people. Dan Hughes

Other Blockchain resources

https://www.simplilearn.com/tutorials/blockchain-tutorial

https://www.simplilearn.com/tutorials/blockchain-tutorial/what-is-web-3-0

https://ethereum.org/en/learn/

https://ethereum.org/en/web3/

Udemy - Ethereum and Solidity: The Complete Developer's Guide

More Resources

- There are free online resources to learn to manage projects, test software, learn to code, learn about infrastructure, learn Agile delivery, learn security concepts
- https://www.khanacademy.org/
- https://www.freecodecamp.org/
- https://101blockchains.com/
- https://101blockchains.com/career/
- https://www.ibm.com/topics/what-is-blockchain
- Blockchain jobs on indeed.com

Thank You