Decentralized energy with Hyperledger Composer

IBM Code Pattern
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Agenda

• Application Overview
• Creating a Business Network using Hyperledger Composer
• Deploying network to a Hyperledger Fabric instance
• Creating an Angular App to interact with the network
• Additional Hyperledger Composer components
• Extending the Pattern
Application Overview

- Github: https://github.com/IBM/Decentralized-Energy-Composer
- DEMO
Creating a Business Network using Hyperledger Composer

- Introduction: https://hyperledger.github.io/composer/latest/introduction/introduction
- Solution Architecture: https://hyperledger.github.io/composer/latest/introduction/solution-architecture
- Playground: https://hyperledger.github.io/composer/latest/playground/playground-index
Deploying network to a Hyperledger Fabric instance

• Deploying business network: https://hyperledger.github.io/composer/latest/business-network/bnd-deploy

• Deploying Decentralized Energy application: https://github.com/IBM/Decentralized-Energy-Composer
Creating an Angular App to interact with the network

• Review Angular App code

• Generate a skeleton Angular App through Yeoman Generator: https://hyperledger.github.io/composer/latest/applications/web
Additional Hyperledger Composer components

• Testing Business Network
  • Explore test.js
  • Composer sdk

• Query
  • Explore queries.qry

• Hyperledger Composer Historian
  • https://hyperledger.github.io/composer/latest/business-network/historian
Extending the Pattern

• Deploy network to IBM Cloud
  • https://ibm-blockchain.github.io
• Deploy app to IBM Cloud
• Adding specific permissions and participant access
• Integrating with IoT to read from power meter and distribute energy
• Setting up real time transactions among participants