

The background features a vibrant blue gradient with subtle, wavy horizontal lines. A diagonal band of lighter blue and green runs from the top right towards the center. The bottom right corner is dominated by a large, flowing shape in shades of purple, pink, and orange, resembling a stylized wave or a modern architectural element.

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ETECH004

Enterprise blockchain infrastructure

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Founder & CEO
Zeeve



Agenda

- Building blocks for Web3 & Blockchain
- Challenges to enterprise blockchain infrastructure
- How we solved the problem
- How AWS was instrumental in solving the problem
- Traction
- A case study - Managing a blockchain consortium in a few clicks

Building blocks for Web3 & Blockchain companies on AWS

CORE COMPUTE & INFRASTRUCTURE

CORE

Compute

Amazon EC2
Amazon EC2 Spot

Serverless

AWS Lambda
AWS Step Functions
Amazon EventBridge

Containers

Amazon ECS
Amazon EKS

IoT

AWS IoT

SECURITY

AWS Nitro Enclaves

AWS Secrets Manager

AWS KMS

AWS Cloud HSM

AWS Cognito

STORAGE SYSTEMS & API

API/NETWORK

Amazon API Gateway

Amazon CloudFront

AWS Direct Connect

AWS AppSync

AWS PrivateLink

STORAGE SYSTEMS

Storage

Amazon S3
Amazon EBS

Databases

Amazon DynamoDB
Amazon ElastiCache
Amazon RDS

Observability

Amazon Managed Prometheus
Amazon Managed Grafana
Amazon Container Insights

MACHINE LEARNING & ANALYTICS

Amazon Kinesis

Amazon Managed Streaming for Apache Kafka (MSK)

Amazon SageMaker

MANAGED BLOCKCHAIN & LEDGER DATABASE SERVICES

Amazon Managed Blockchain

Amazon Quantum Ledger Database



Hosting a blockchain node on AWS

DESCRIPTION

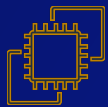
Blockchain nodes are critical to the decentralized structure of Layer 1 and Layer 2 blockchains. They sustain and secure the blockchain by storing a copy of the decentralized ledger and performing certain functions to validate the legitimacy of transactions.

AWS provides more than 275 instance types to optimize cost and performance to fit your specific nodes requirements. Companies can easily host a blockchain node on AWS and delegate it for on-chain activities including staking and analytics.

USE CASES

Layer 1 & 2 | Staking-as-a-service | On-chain analytics | Lower latency access

RELEVANT SERVICES



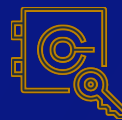
Amazon EC2



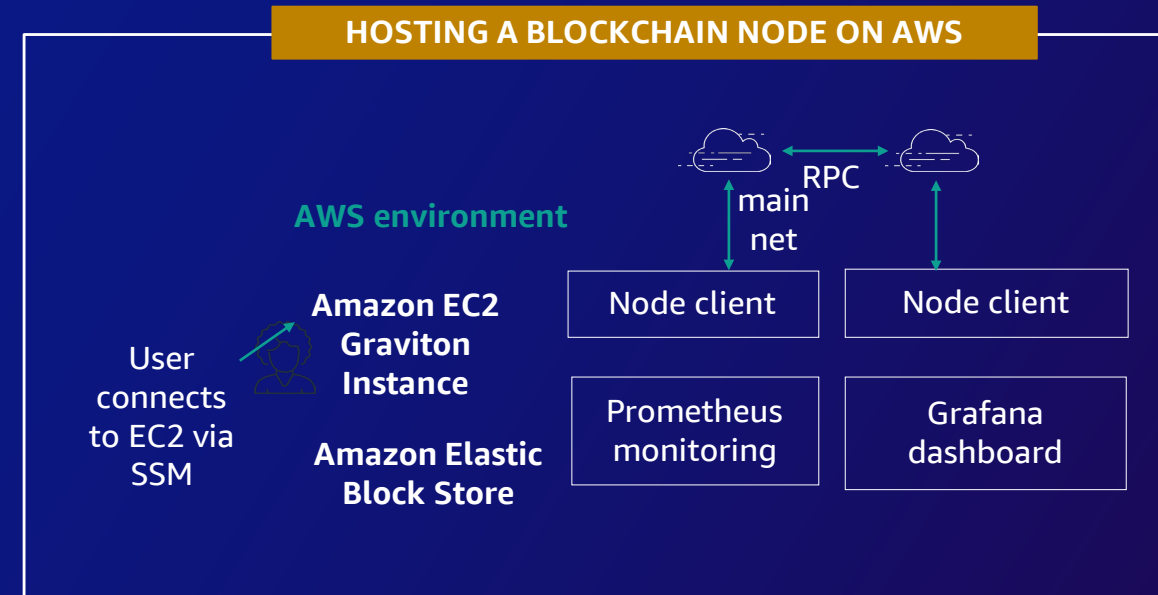
AWS Nitro Enclaves



AWS Key Management Services



AWS CloudHSM



Challenges of Blockchain Infrastructure: What's needed?

Dr. Ravi Chamria

Founder & CEO
Zeeve



Blockchain infra automation

- The automation should be for, - blockchain protocol of choice, IPFS, RPC endpoints, privacy, security, etc
- Creating your consortium in few button clicks, without losing the decentralisation
- Decide your infrastructure with no compromise, your cloud or on-premise. Every stakeholder in your consortium gets to make their own decision
- Best in class security practices standard across all deployments
- Analytics and Monitoring which can scale with your decentralised deployments



How Zeeve solved it

A low code blockchain as a service enterprise platform



Supports Multiple Blockchain Protocols

100% Automated and No Code

Heterogenous Cloud Deployments

Supports all major cloud providers including Private Cloud and On-Premise

Blockchain Analytic and Real time Monitoring

Advance Analytics and Monitoring Alerts and Notifications

Web Services for Faster DApp Development

CI/CD Integrations to Services like IoT, Governance, Storage, Secure Vault etc



Platform and products



Value proposition

Managing Enterprise Blockchain Networks is super challenging!

THE LEGACY APPROACH?

Manual Deployments – **Poor Time to Market**

Production grade networks take minimum of 6 weeks
to Go Live

Build and Maintain DevOps Expertise – **High Costs**

Huge challenges in hiring and training Blockchain
resources, CAPEX intensive

Manual Monitoring – **Reactive and Error Prone**

No standard toolset available for Blockchain
Analytics and Monitoring

Compliance and Security – **Lack of Standards**

Plethora of protocols with varied standards,
Vendor dependency



ZEEVE IS A DIFFERENCE.

No Code Deployments – **Faster Time to Market by >90%**

100% Automated and configurable to go Live in less
than 40 minutes

Pay as you Go – **Reduce Team and Cost by >70%**

Avail Zeeve Experts and No-code experience, OPEX
based

Real time Monitoring – **Pro-Active and Self Healing**

Inbuilt Analytics and Intelligent Monitoring with
optimized setup

Unified Compliance and Security – **Organization wide**

Multiple protocols and clouds under one umbrella with
standardized processes

How AWS was instrumental for Zeeve

Managing Enterprise Blockchain Networks is super challenging!

ZEEVE + AWS ADVANTAGE

AWS SERVICES USED

On-demand and high performance compute	➤	Amazon EC2 - VM and Bare Metal – achieving best throughput for dApps
Flexible, on-the-go versatile containerization	➤	Amazon EKS, Amazon ECR – achieving self-healing and automatic failover for high uptime of nodes
Reliable, High Throughput and Scalable Storage	➤	Amazon EBS, Amazon EFS, Amazon S3 – handling huge archive, IPFS and indexed data nodes
Hassle-free and managed database operations	➤	Amazon RDS– managing in-depth monitoring and analytics data reporting
Securing the critical key infrastructure	➤	AWS Cloud HSM, AWS KMS, AWS Secrets Manager – securing validator and staking keys
Low Latency, Highly secure network and traffic management	➤	Amazon Route53, Amazon CloudFront, AWS WAF– enabling high availability, API endpoints security

Early traction

Zeeve BaaS Platform is trusted by 23,000+ developers and 30+ Enterprises and Blockchain Consortia

Early Traction & Customers

DCB BANK

vodafone

MARKETNODE

intel

GATENET
GATEWAY TO A DIGITAL MARKET

energy web

bitcoin
LATINUM

zuron

GRAMCOVER

intain

Trade Reboot

teri

TILUF

SAFEGOLD

block
tickets

unicus

unico

Interswitch

booleanlabs

Fluree

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ENGINEERING COLLEGE
IMS
GHAZIABAD

AMITY
UNIVERSITY

WRITER
INFORMATION

BLOCK
CONTROL

BlockchainDC

Case study: Trade finance consortium



Category: **Trade Finance**



Blockchain Protocol:
HyperLedder Fabric 2.2



Cloud: **AWS**



Network size: **17 Nodes**

Case study: Trade finance consortium



Challenges

- Identify the most suitable Blockchain protocol to achieve the business goals
- Enterprise grade network that has high availability, security and performance
- Cloud agnostic deployment of nodes so that third party stakeholders are not locked to a single cloud service provider
- Continuous monitoring of the deployed network as a service to reduce upfront and ongoing costs
- An enterprise level support the Blockchain network



Zeeve Approach

- AWS cloud architecture including node application instances, RDS for off-chain database, security rules, load balancers and the backup plan
- Build the Trade Finance DaApp and Smart Contracts
- Governance smart contract to govern the rules of the consortium
- Deployment of HyperLedger Fabric 2.2 on Kubernetes cluster on AWS
- Enabled the invitation module to on-board the initial users on the platform



AWS Services used

Amazon EC2 - VM and Bare Metal

Amazon EKS,
Amazon ECR

Amazon Route53, Amazon
CloudFront, AWS WAF

Amazon RDS

AWS Cloud HSM, AWS KMS, AWS
Secrets Manager

Amazon EBS, Amazon EFS,
Amazon S3

Case study: Trade finance consortium



Results

- **Seamless Onboarding** – Zeeve helped quick and hassle-free onboarding of users who wanted to host their own nodes
- **Cost Saving of ~45%** – Zeeve helped optimized setting up of the nodes and network instances
- **Faster time to market by ~80%** – Zeeve accomplished the complex deployment of DAB network of Corda & Cordite Go live within days time
- **Proactive Monitoring** – Zeeve features advance analytics and proactive monitoring of Blockchain and cloud resources
- **24/7 Support** – Zeeve provided DevOps experts and Blockchain engineers for initial deployment architecture and ongoing management of the network



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Thank you!

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Startup Solutions Architect
AWS India

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session survey