UBIQ

UBIQUITOUS NETWORK

Next-Generation Computing Infrastructure

December 2022

Market Overview

Growing Demand

The upcoming intelligent society requires massively growing ubiquitous, diverse & heterogeneous computing resources

Technical Limit

The computing power of single-core chip & the cores in a multi-core processor can no longer be technically improved

Network Constraint

The constraint of network bandwidth & latency requires a multi-level computing power deployment architecture

Underutilised Resource

Massive computing resources such as PCs, smart phones, IOT devices, & various data centers are underutilised

Driving Next-generation Computing

Ubiquitous Computing

Requirements for Ubiquitous Computing

The essence of Ubiquitous Computing

is to solve the problem of global computing resource access & scheduling

Ubiquitous Computing Power

ubiquitous, distributed,
massive data/computing power

Computing As a Service

cloud-native, fast to adapt, integrates fragments

Diversified Demands

anytime, any type, any scale

Flexible Network Scheduling

easy access, flexibility,
cloud-edge-device interconnection

Agile Network Scheduling

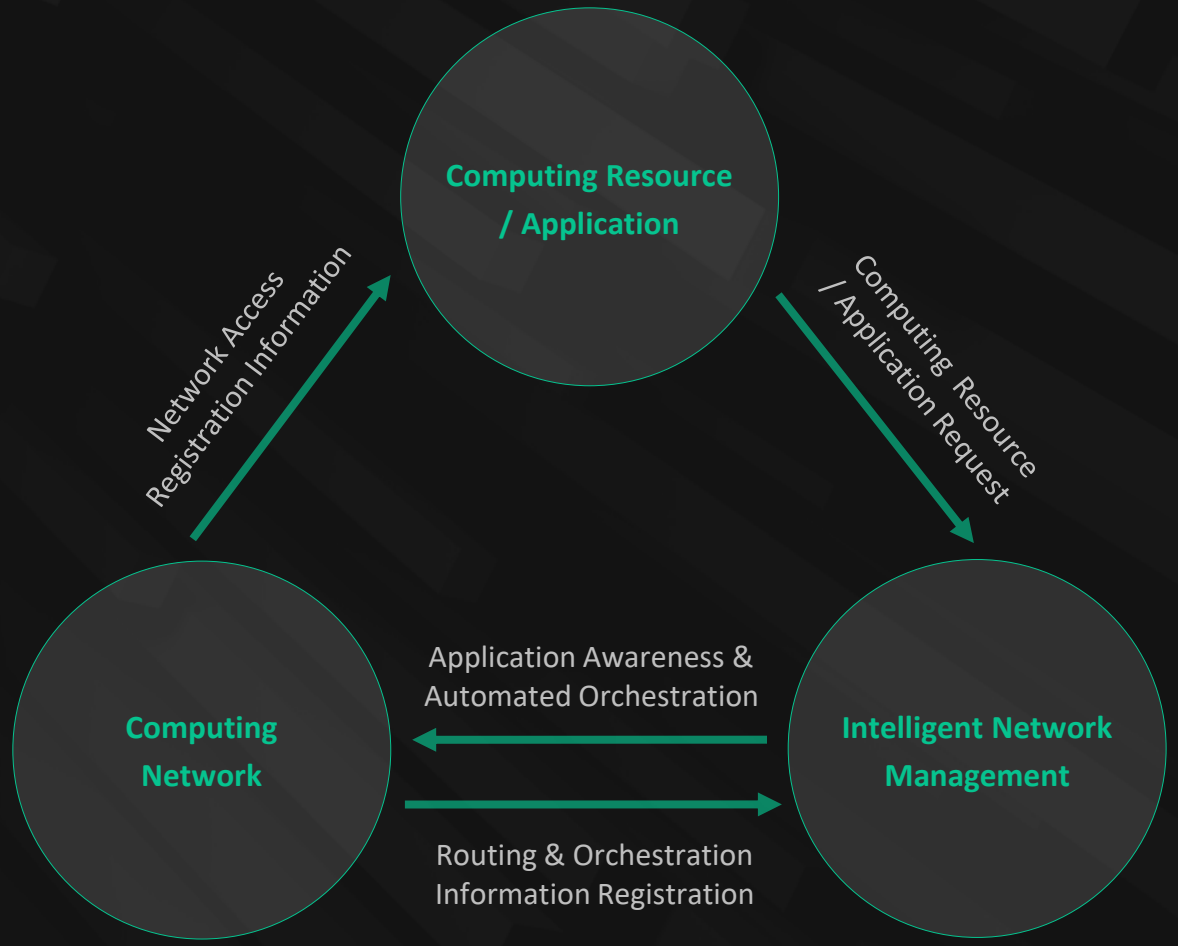
fast provisioning, flexible adjustment, no waiting

Intelligent Network Scheduling

overall awareness, automated orchestration,
adaptive scheduling, intelligent management

UBIQnet Solution

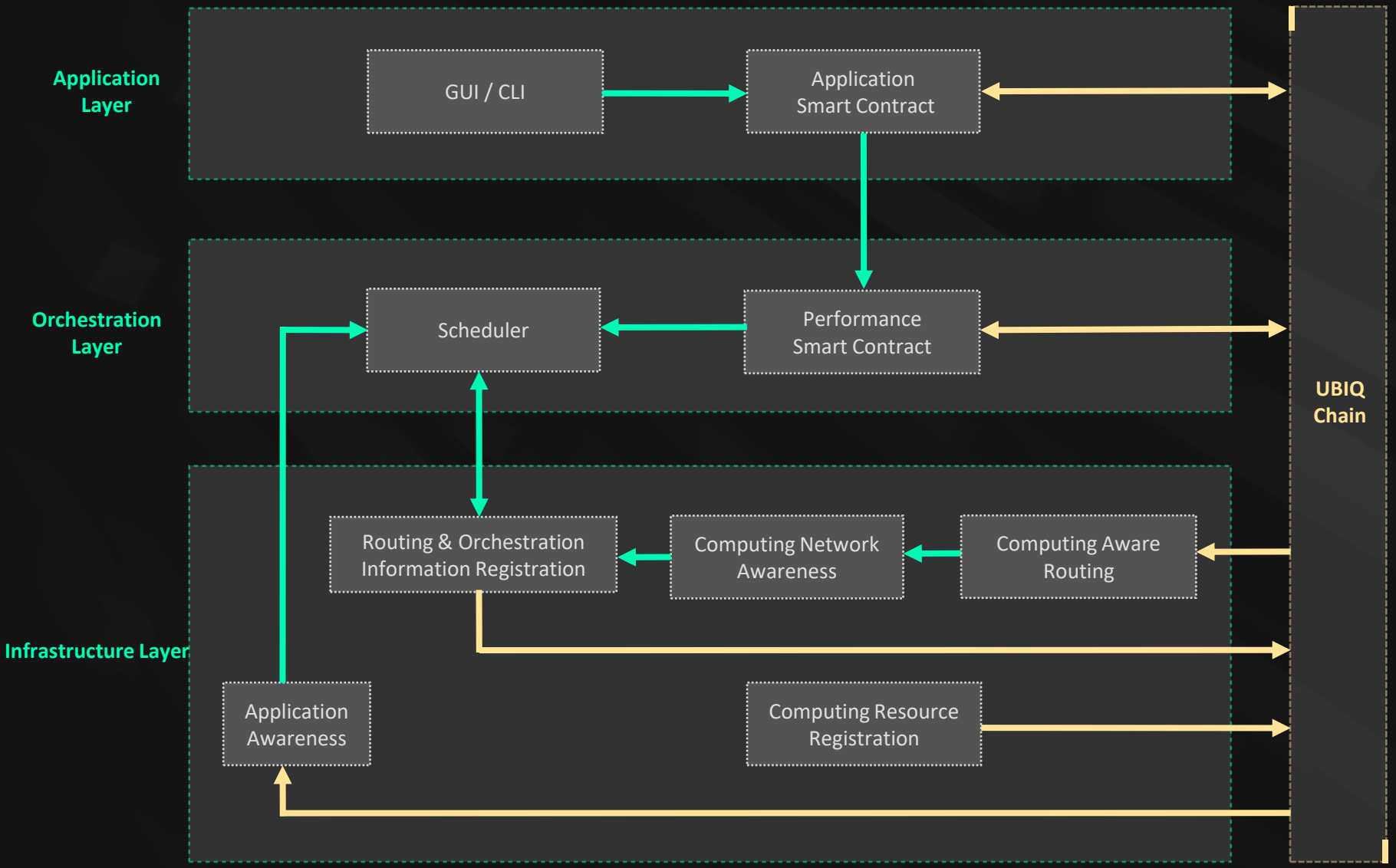
Smart Contract
enables heterogeneous computing
resource tokenization & trading



Unified Scheduling
covers cloud-edge-device
multi-level computing

Intelligent Management
establishes overall computing
resource map

UBIQnet Architecture



- **GUI/CLI** provides graphic user interface/ command line interface to interact with UBIQ
- **Application Smart Contract** customizes computing resource scheme for application
- **Performance Smart Contract** determines the required application performance
- **Scheduler** handles resource orchestration, machine deployment and service delivery
- **Routing & Orchestration Information Registration** maintains routing & orchestration information of computing resources
- **Computing Network Awareness** obtains computing resource status of all nodes in real time
- **Computing Aware Routing** enables auto-discovery of the connectivity of registered computing resources
- **Application Awareness** provides basis for adaptive scheduling of computing resources by application
- **Computing Resource Registration** forms trusted, traceable and measurable computing resources
- **UBIQ Chain** ensures trusted resources, operations and data throughout the process

How UBIQnet Works

Standardization

Connecting Any Computing Device to UBIQ net
Generating Computing Resource NFT --- CRNFT

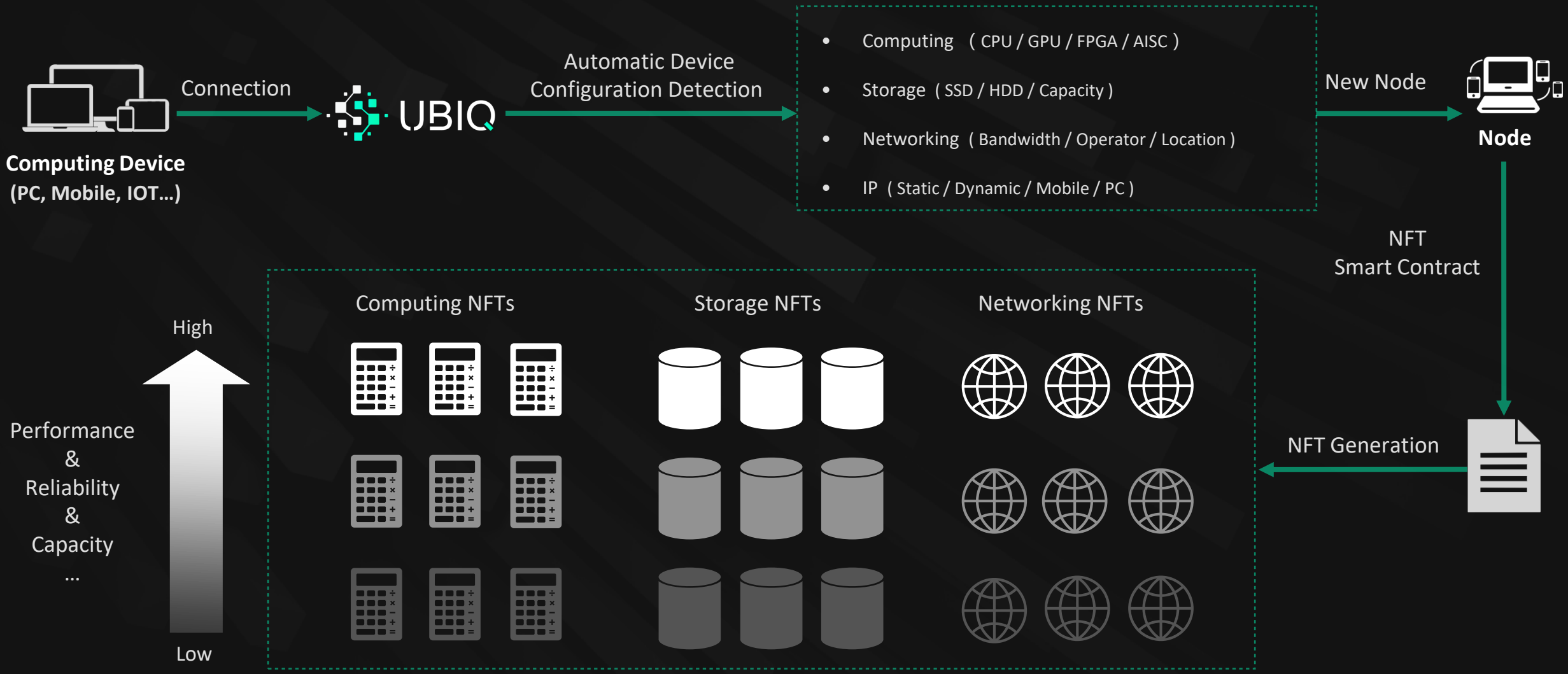
Modularization

Customizing Computing Resource Schemes & Scheduling Schemes for Heterogeneous Applications via Smart Contracts

Automation

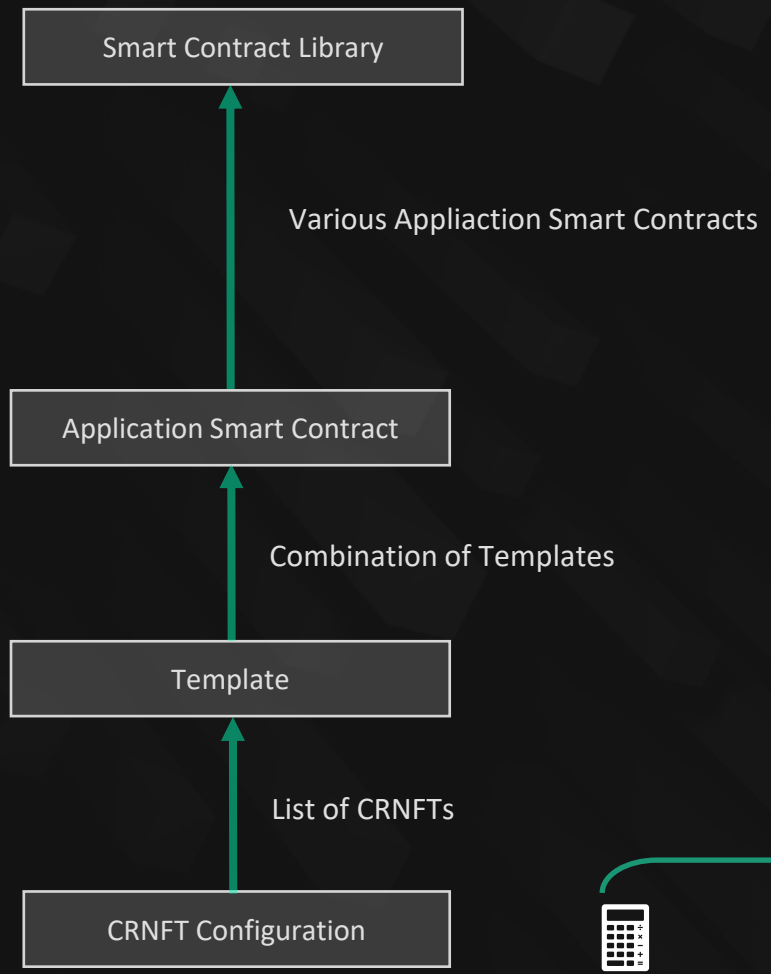
Automated Resource Orchestration, Machine Deployment and Service Delivery for Ubiquitous Computing

Standardization



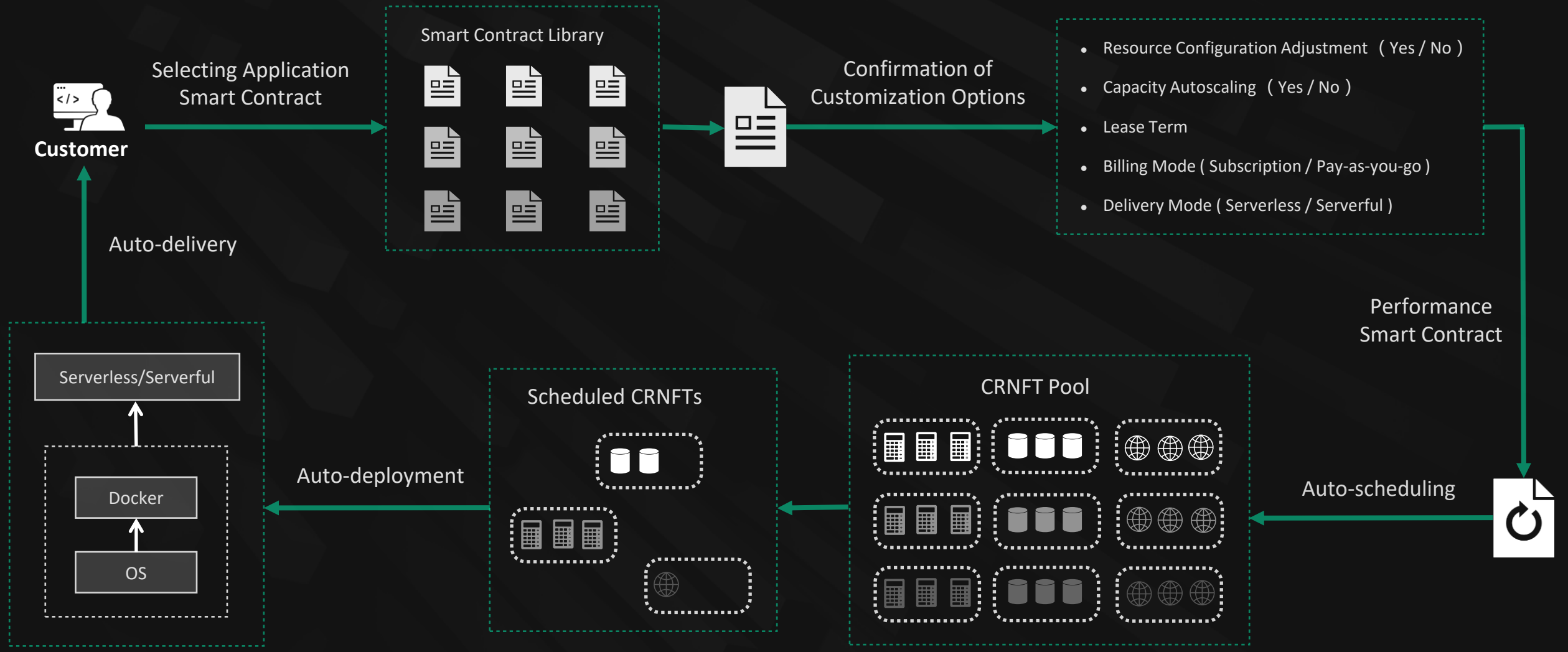
* The attributes of each NFT record the features of corresponding computing resource

Modularization



* Scheduling smart contracts can also be created
to customize scheduling schemes
for each different computing scenario

Automation

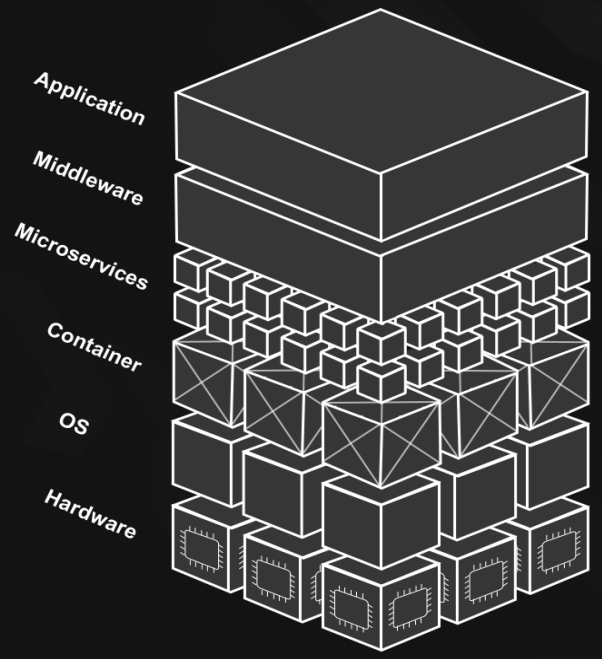

Customer
Selecting Application Smart Contract
Smart Contract Library
Confirmation of Customization Options
Resource Configuration Adjustment (Yes / No)
Capacity Autoscaling (Yes / No)
Lease Term
Billing Mode (Subscription / Pay-as-you-go)
Delivery Mode (Serverless / Serverful)
Performance Smart Contract
Auto-delivery
Serverless/Serverful
Docker
OS
Auto-deployment
Scheduled CRNFTs
CRNFT Pool
Auto-scheduling

UBIQnet Features

Rebuilding the technology stack from the ground up for Ubiquitous Computing

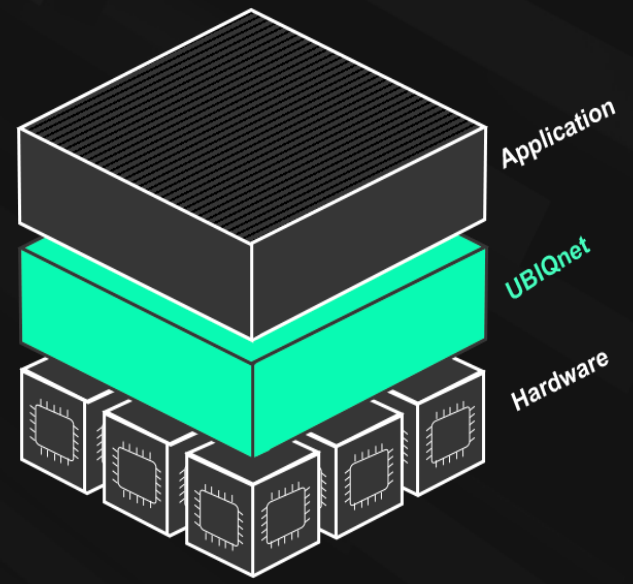
- Request application & performance level, UBIQnet does the rest
- Intelligent orchestration of hardware via standardized resources (CRNFTs)
- All resources continuously monitored and mapped using UBIQ chain

Currently



- Reliance on multiple frameworks & technologies
- Requires bespoke architecture specific to the application & restricted to that scale
- High skill & resource cost requirement
- Requires manual ops & maintenance

UBIQnet



- Ubiquitous computing as a first-class concern
- Distributed cloud-native design for any cloud, edge or device
- Infrastructure-agnostic enables quick development & deployment with effective cost
- Adaptive scaling removes manual operations
- Designed for heterogeneous computing application

Competitive Landscape

Dimensions		Public Cloud (E.g. AWS, Google Cloud)	UBIQ	Decentralized Computing Network			
				Definity	Filecoin	Helium	Flux
Computing Resource Provider		Data Center	Any Computing Device	Data Center	Data Center	Customized Device	Customized Device
On-Chain	Computing Resource Tokenization		Yes				
	Smart Contract Scheduling		Yes				
	Computing Resource Trading Result		Yes	Yes	Yes	Yes	Yes
Available Resource	Computing	Centralized	Decentralized	Decentralized			Decentralized
	Storage	Centralized	Decentralized	Decentralized	Decentralized		Decentralized
	Networking	Centralized	Decentralized	Decentralized		Decentralized	
Heterogeneous Computing Application		Part of the Edge Computing	Any Computing Application				

Tokenomics

Provider

Provider	Staking	Mining Reward	Dimensions for Reward Evaluating
Normal Node	No staking	On demand	• Capacity of Computing Resource • Effective Online Time • Reliability • Amount of Staked Tokens
Stable Node	Staking	On demand / Contribution	
Validator Node	Staking	On demand / Contribution / Validation	

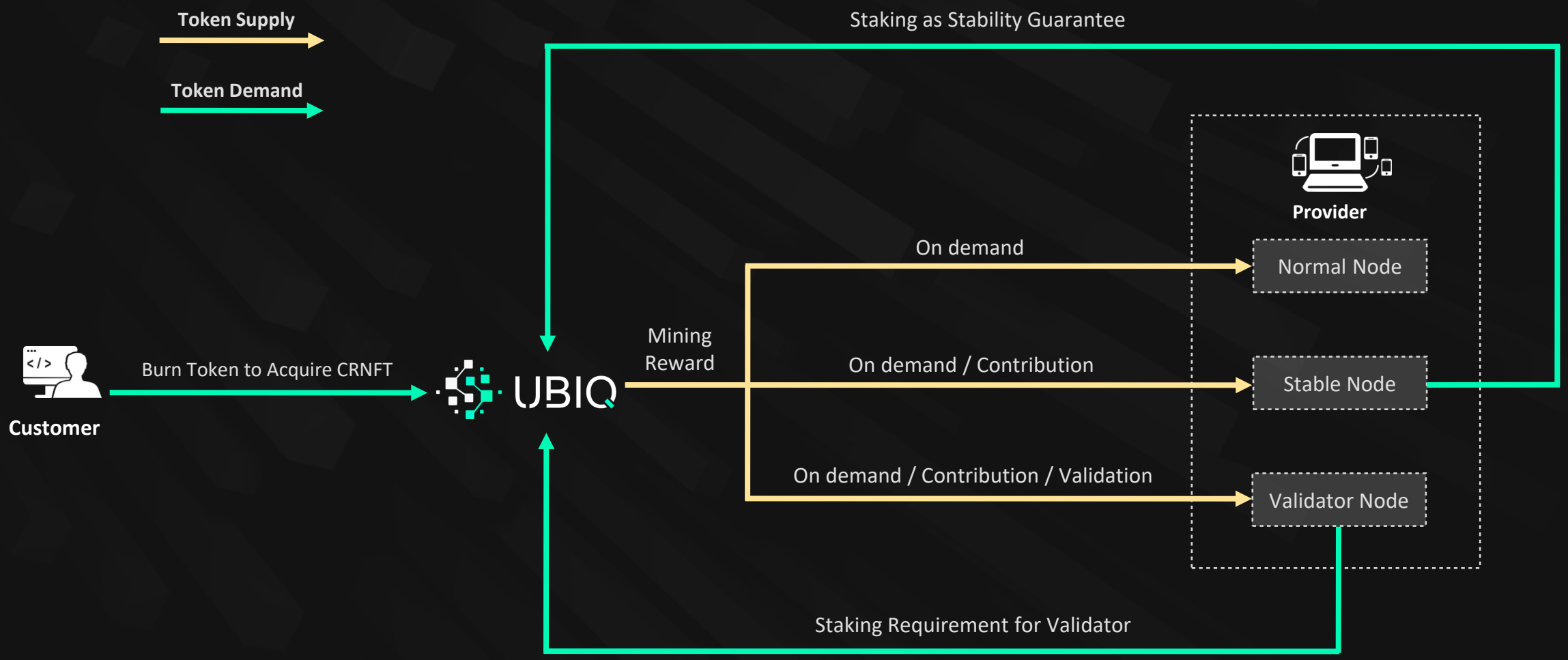
Developer

Developing New Application/Scheduling Smart Contract Based on the Trusted Operation Data on UBIQ Chain

UBIQ

- Oracle Supply & Demand Prediction Mechanism
- Treasury for Ecosystem Development and Monetary Policy

Tokenomics


Token Supply
Token Demand
Staking as Stability Guarantee
Provider
On demand
Normal Node
Mining
Reward
Burn Token to Acquire CRNFT
UBIQ
On demand / Contribution
Stable Node
Customer
On demand / Contribution / Validation
Validator Node
Staking Requirement for Validator

UBIQ

Thanks

@FX_NZ