Top 3 Software Trends & Debates

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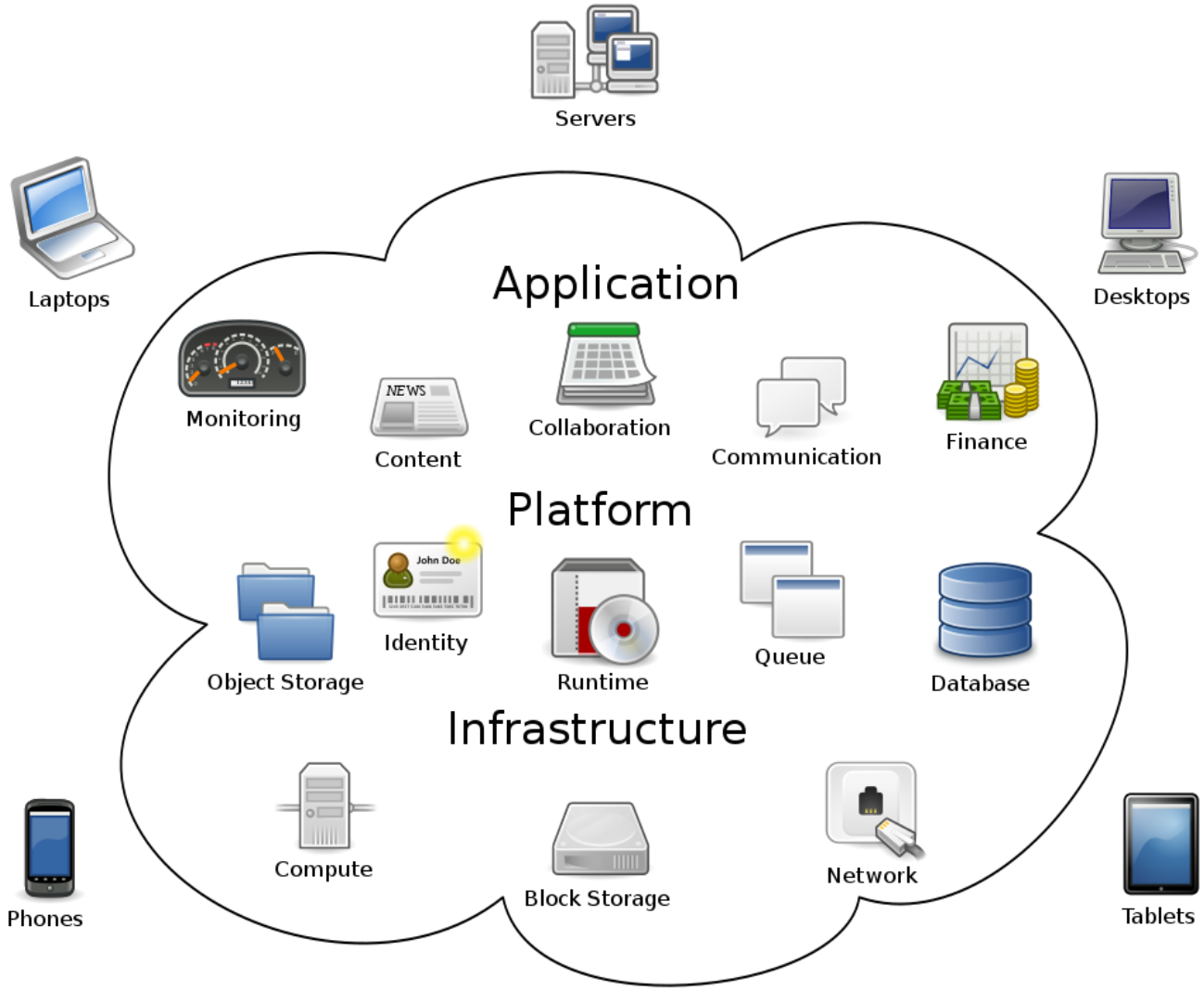
CECS 445

Lecture 18: April 20th, 2021

Final Presentation Date: May 6th

Debate #1: Cloud vs. Edge Computing



Benefits of Cloud Computing
(on-demand availability of computer resources)

- Cost
- Flexibility
- Simplicity
- Sustainability
- Quality Control
- Security
- *Example*: Tesla's nightly navigation system update

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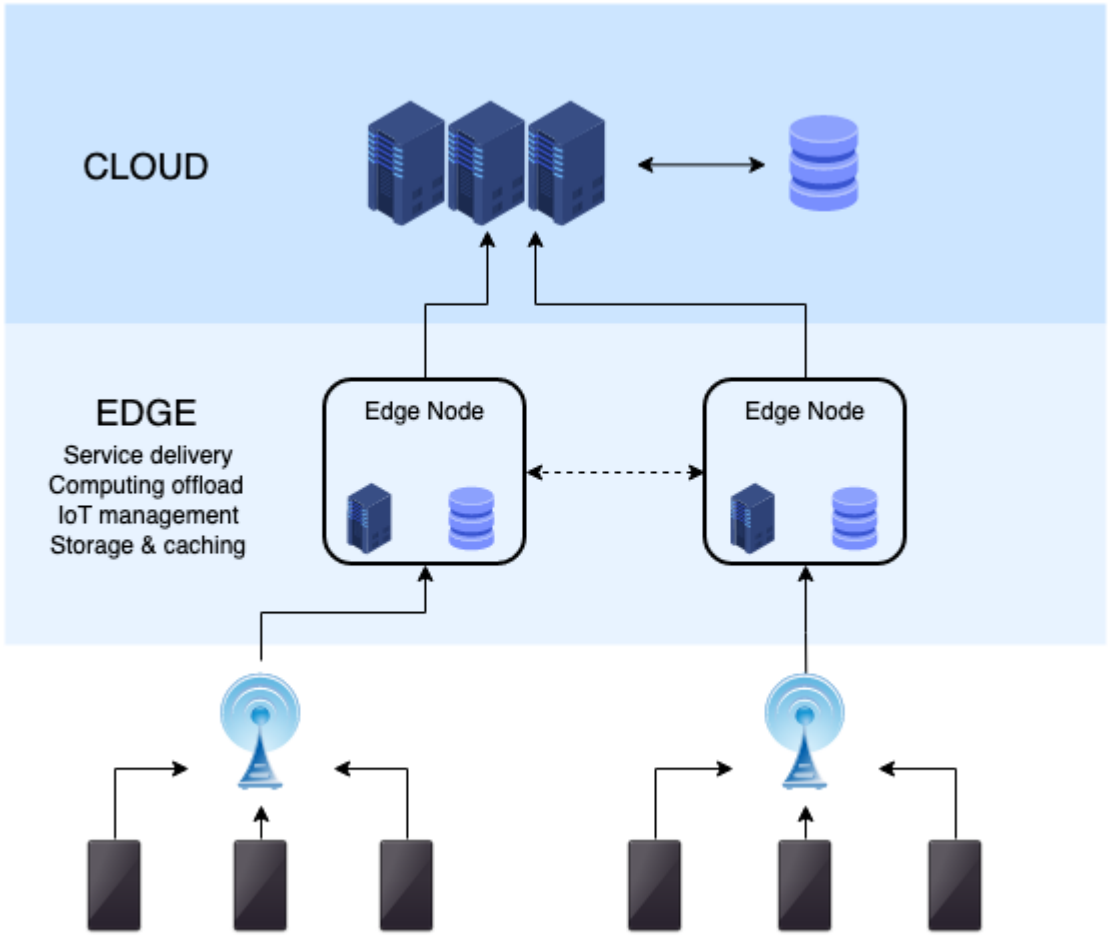
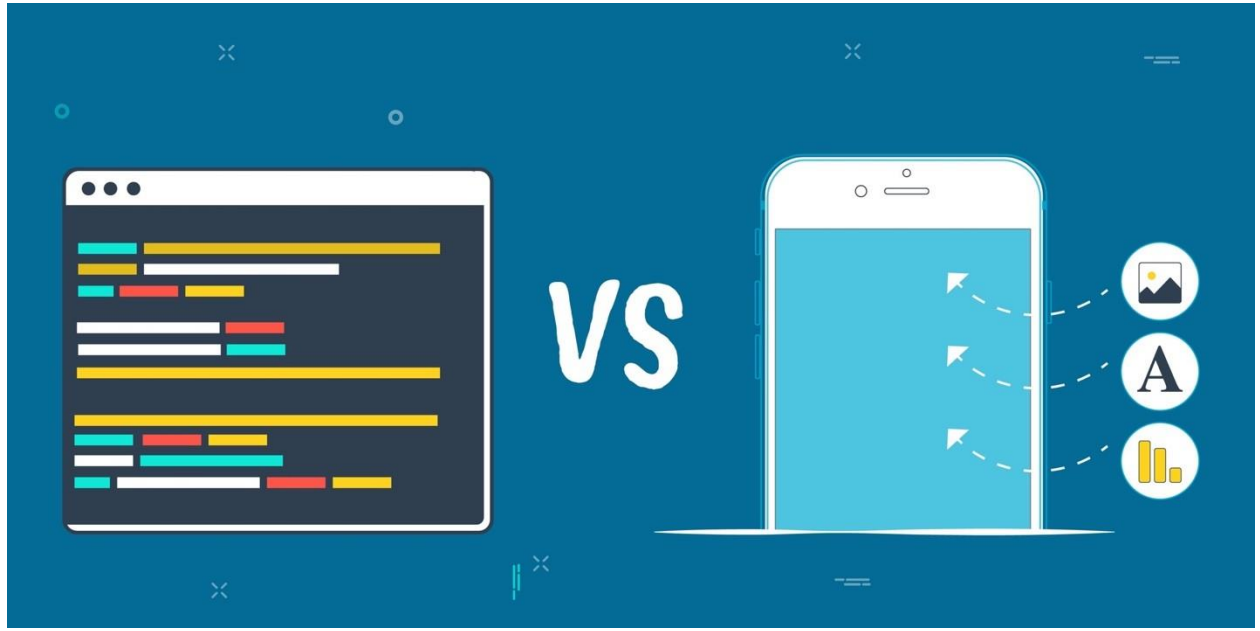


Benefits of Edge Computing

(distributed computing paradigm closer to device)

- Latency
- Bandwidth
- Embedded System
- Rich Applications: IoT, connected cars, smart cities, industry 4.0, VR
- Challenges: scalability, single-point failures, efficiency
- *Example*: Tesla's navigation system indicating "left turn in 50 feet"

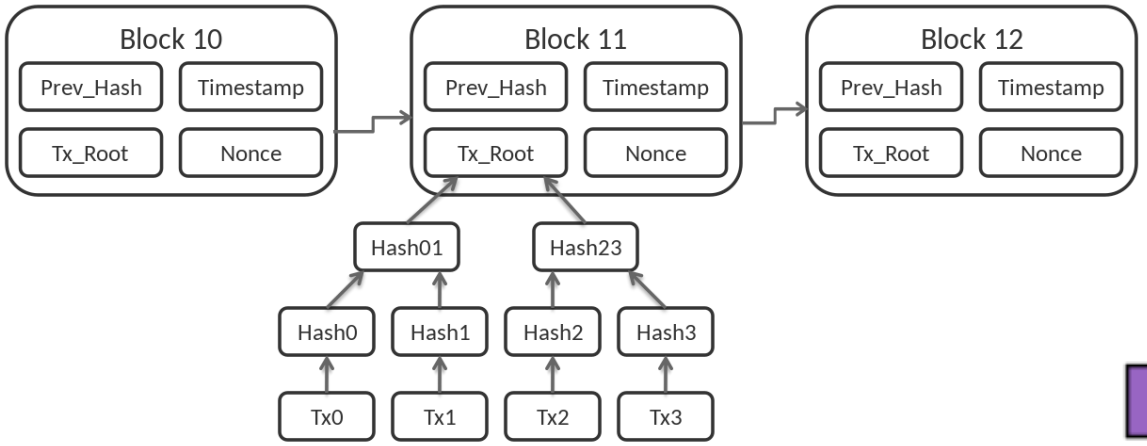
Debate #2: Low-Code & No-Code Platforms

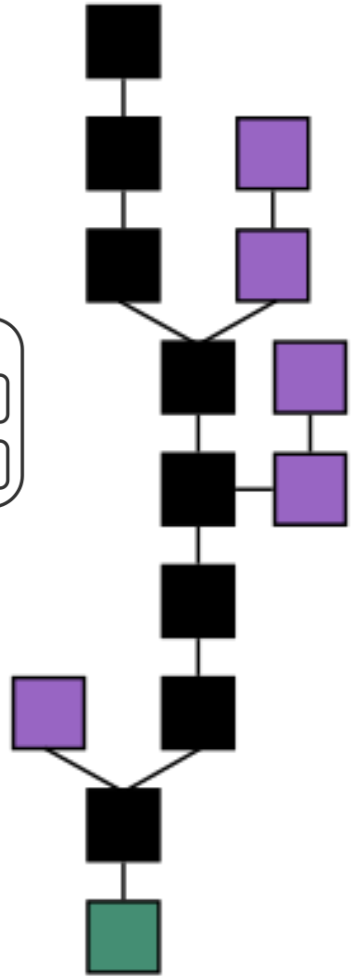


Benefits of No/Low Code Platforms

- Wider use cases
- Cost & fast development
- Continuous integration
- Modularity
- Embedded customization
- *Challenges*: security, compliance, maintenance, scale, criticality
- *Example*: web development & ML

Debate #3: Blockchain & NFTs

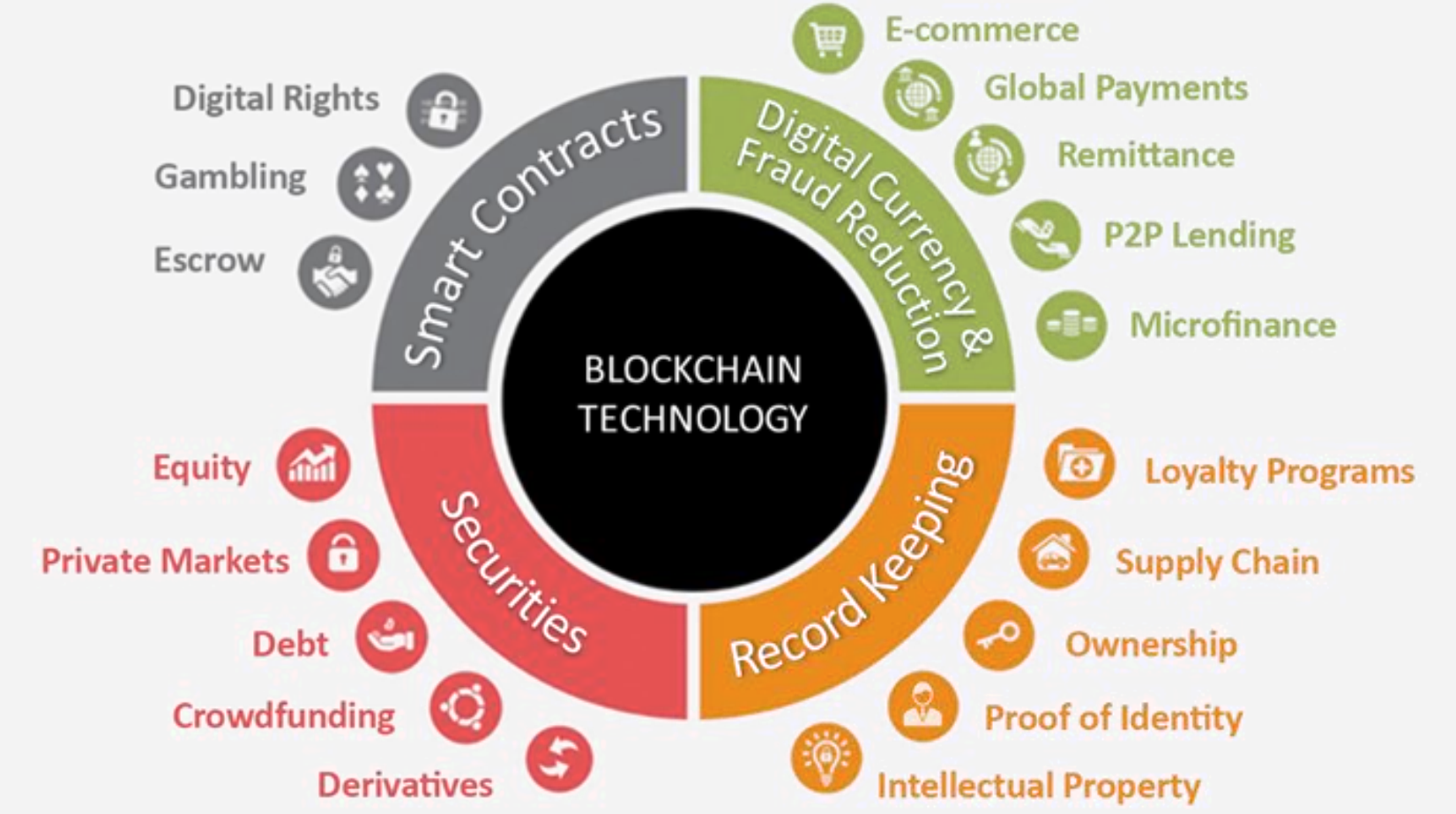




Blockchain Platforms

- Blocks (i.e., data) connected via cryptography
- Peer-to-peer network
- Protocol for inter-node communication and new block validation
- Commit statements, agree on reality, replicate records
- Provenance (where did it come from?), Immutability (can it be changed?), Veracity (is it true?)

Debate #3: Blockchain & NFTs



Debate #3: Blockchain & NFTs