Volunteer Cloud Computing

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Introduction
Related Work
Infrastructure
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Future Work
Conclusion
References

Agenda

1. Introduction
   - Volunteer Computing
   - Cloud Computing
   - Volunteer Cloud Computing
2. Related Work
   - Cloud@Home
   - P2PCS
   - Analysis
3. Infrastructure
   - Overview
   - Physical Layer
   - Virtual Layer
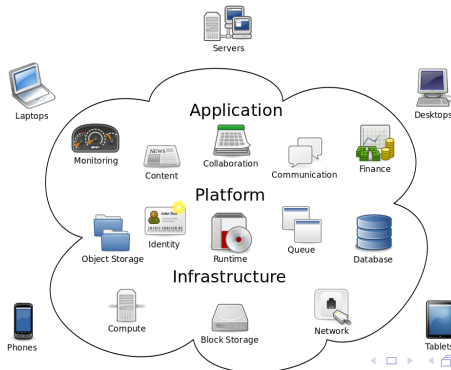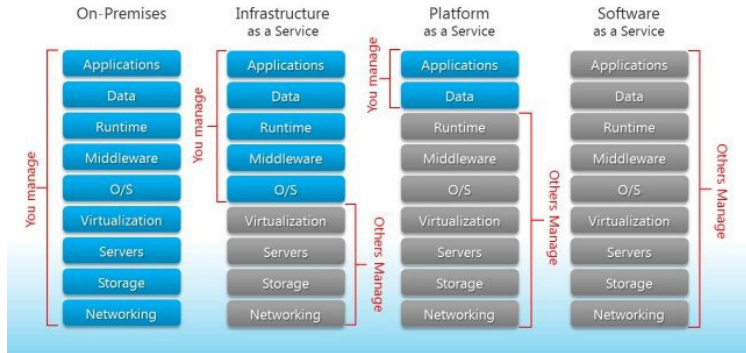   - API Layer
4. Open Problems

Volunteer Computing

- Great Internet Mersenne Prime Search [1996]
- Distributed Computing based on Collaboration
- ... throughput of 137.023 TeraFLOP/s

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Cloud Computing
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Cloud Computing

- Natural evolution of Web 2.0, SoA and Virtualization technologies.

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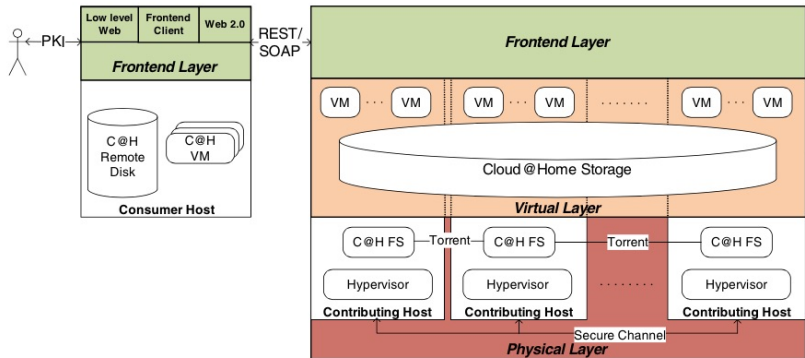Volunteer Cloud Computing

Separation of Responsibilities

Volunteer Cloud Computing
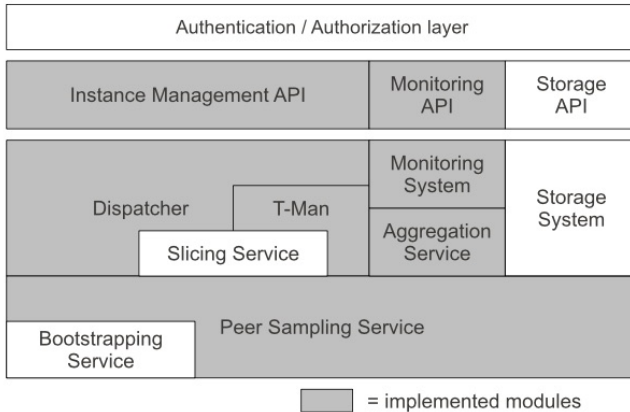
- Volunteer + Cloud = Volunteer Cloud Computing

Related Work

- **Cloud@Home**[2009] and **Peer-2-Peer Cloud System**[2011]
- ... and a handful of conceptual reflections
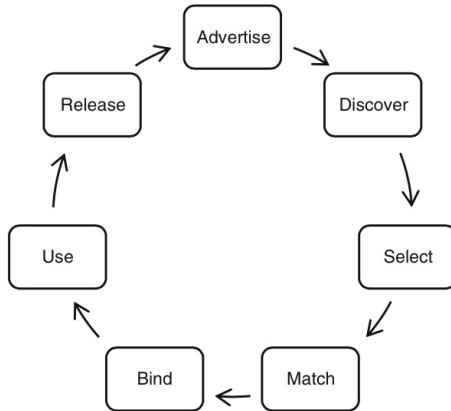
Cloud@Home

P2PCS

= implemented modules

Brief Analysis

- **Scope**

- **Novelty** generally incurs under-specifications of the
  requirements!

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Requirements

INFRASTRUCTURE

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