



Cloud Preservation Experiences

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Agenda

- ◆ DuraCloud Introduction
- ◆ Architectural Overview
- ◆ Cloud Challenges
- ◆ Standards?



Introduction

DuraCloud is:

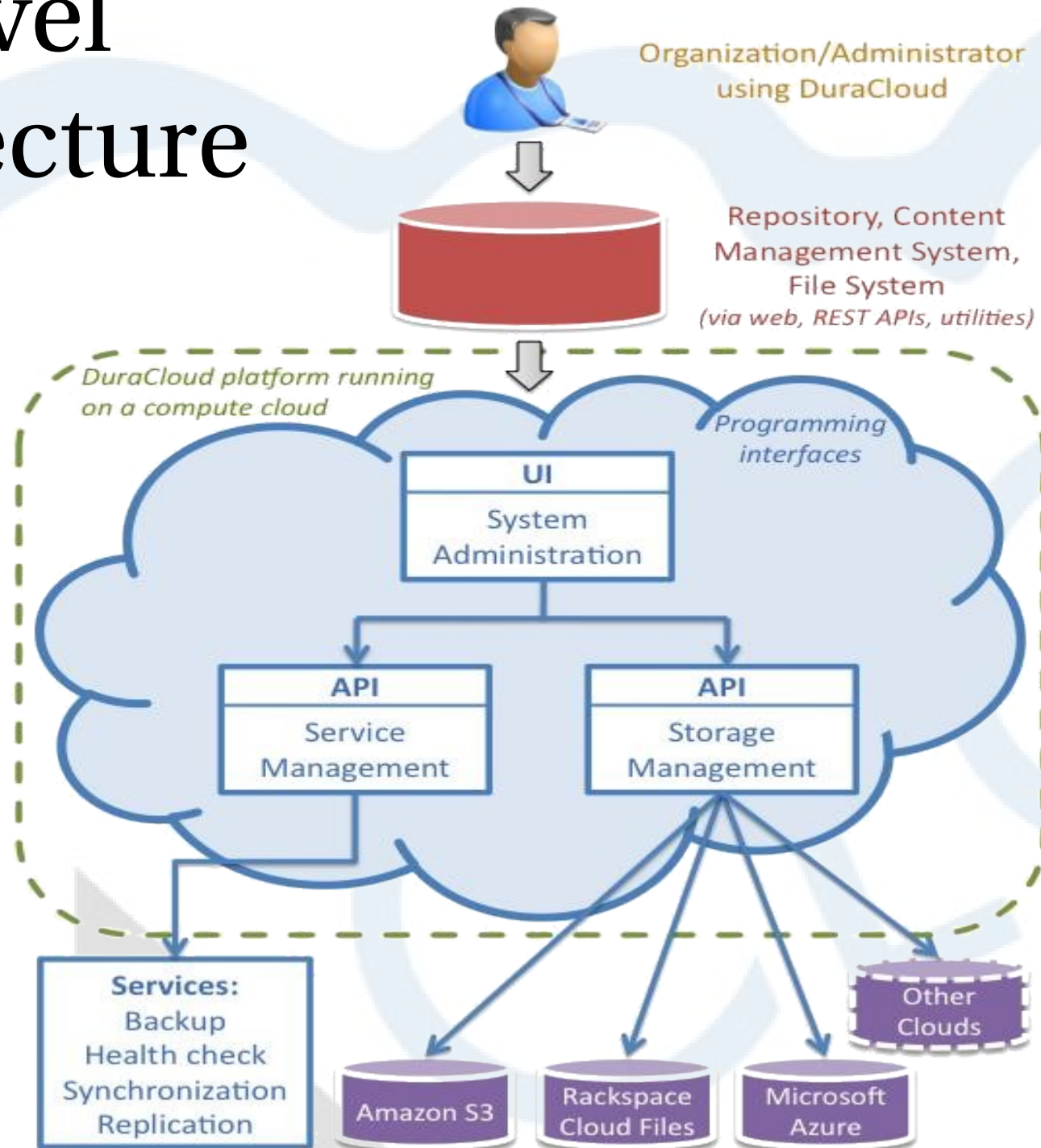
- Open source software suite
- Hosted service

Core motivations:

- Preservation sensibilities in cloud
- Rich content access
- Service platform
- Community-based solution
- Ease entry to cloud



Top-level Architecture



Experiences & Challenges

- ◆ Eventual consistency
- ◆ Server volatility
- ◆ HTTP limitations
- ◆ Bit integrity
- ◆ Storage provider APIs
- ◆ Affordability & Simplicity





Eventual Consistency

Given a sufficiently long period of time over which no changes are sent, all updates can be expected to propagate eventually through the system and all the replicas will be consistent.

Server Volatility



- Application “state”
- Monitoring

HTTP limitations

Payload < 1-GB



Bit Integrity

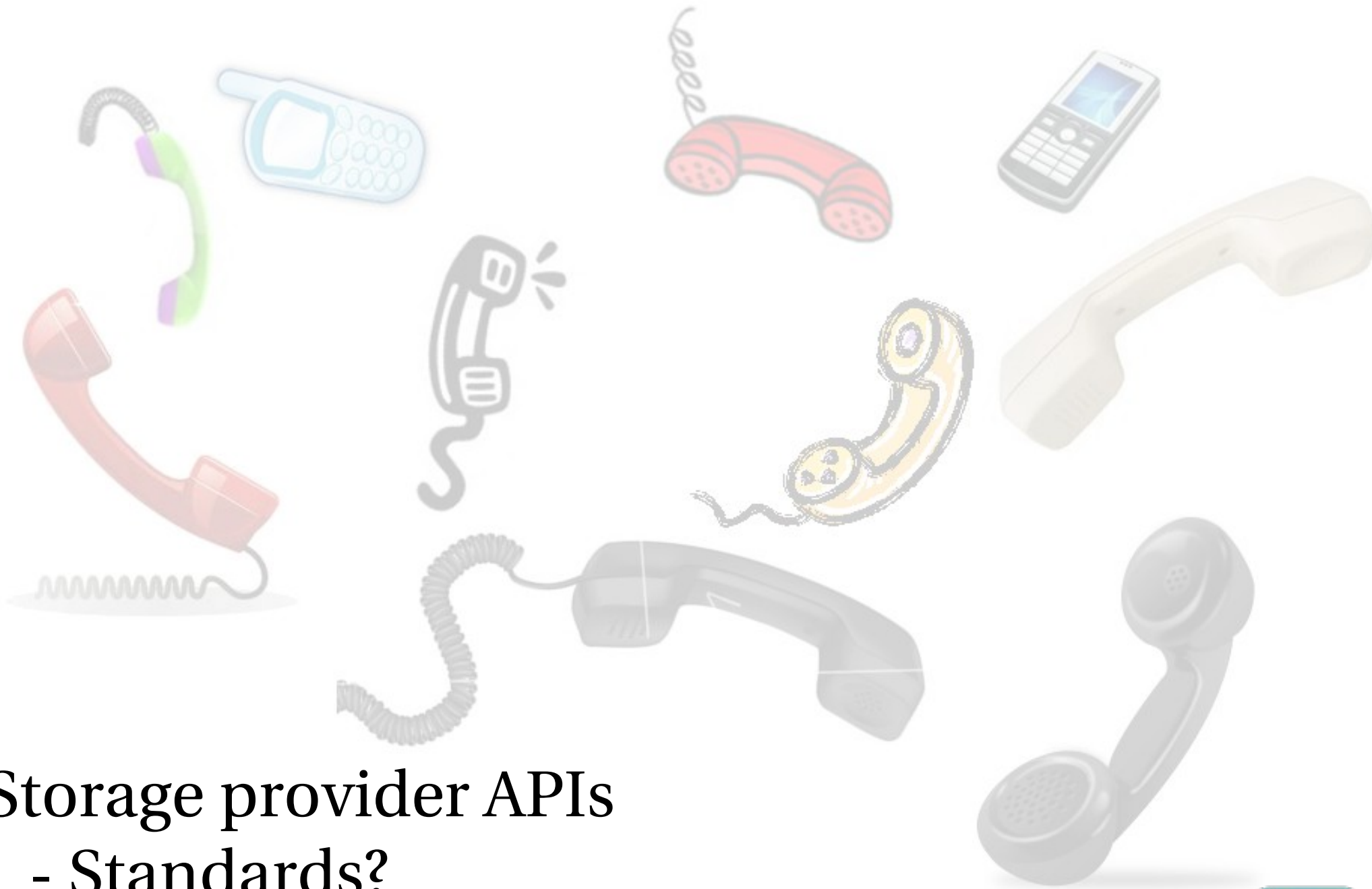
- ◆ On Ingest

Unit of verification: PUT request

- ◆ On Demand

Preferred: provider-side w/salt



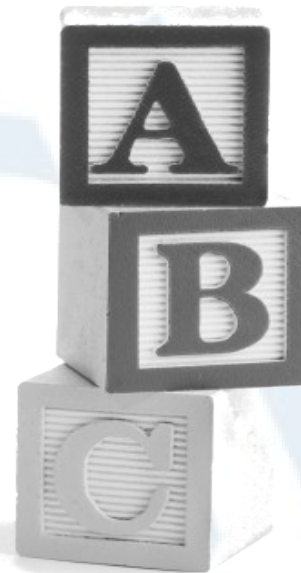


Storage provider APIs - Standards?



Affordability & Simplicity

- ◆ Optimize fixed costs
Multi-tenancy
- ◆ Ease of use





DURACLOUD™

Questions?



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Photo / Icon Acknowledgments

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