Data Management Challenges in India's Unique Identification Number System

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Invited Abstract

The Unique Identification Authority of India (UIDAI) has been created, with the mandate of providing a Unique Identity (Aadhaar) to all Indian residents. The Unique Identification (Aadhaar) Number, which identifies a resident, will give individuals the means to clearly establish their identity to public and private agencies across the country.

Uniquely identifying residents among billion people using biometrics has never been attempted anywhere in the world. With more than a billion entries and about 10-20 MB of data per resident including lifetime updates, just the raw data makes the database more than 20 petabytes. On top of this, millions of authentication requests having to be audited, business intelligence data marts, and other modules add further complexity in data management.

This talk explores these data management issues within UID (Aadhaar) system providing some potential solutions to scalability, performance, management, and security of such large database.