Diaspora: Join and Strengthen Information Across Administrative Domains

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**Goal**

- Extend critical information across company boundaries
  - Orthogonal & builds on identity management (enabling portability of identity information across autonomous security domains)
- Enable users of one domain to access data or systems from other domains seamlessly / with no explicit user administration effort

**The problem**

- Seamlessly interact with existing systems / minimize adoption efforts
- Assumptions
  - Data stored in relational repositories
  - Data can be made readily available by means of standard web interfaces
  - In particular stateless "active" pages

**Approach**

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**Usage Example: Automatic Replication of Database Tables**

- Web hosting companies offer
  - Restricted user account (MySQL + FTP)
  - MySQL, PHP, Perl, Python, Ruby as lightweight Apache modules
- Owner of multiple accounts / over heterogeneous hosting companies
  - Leverage all for reliability, replicate
  - May only use the above mentioned model

**Insight**

Diaspora as a webapp itself

- A collection of choreographed web apps on each site
  - Store data structures pertaining to own web application logic
  - Access local domain data and make it available to peer web apps on different sites / different domains

**Coordinator entity – Administrator**

- A distributed system in itself handling: replication, leader election, failure detection, rollback & recovery
- Stores its data replicated in the meta tables

**Issues**

- Database privacy
- Consistency (Harry Potter != H. Potter)