CLOUD COMPUTING APPLICATIONS
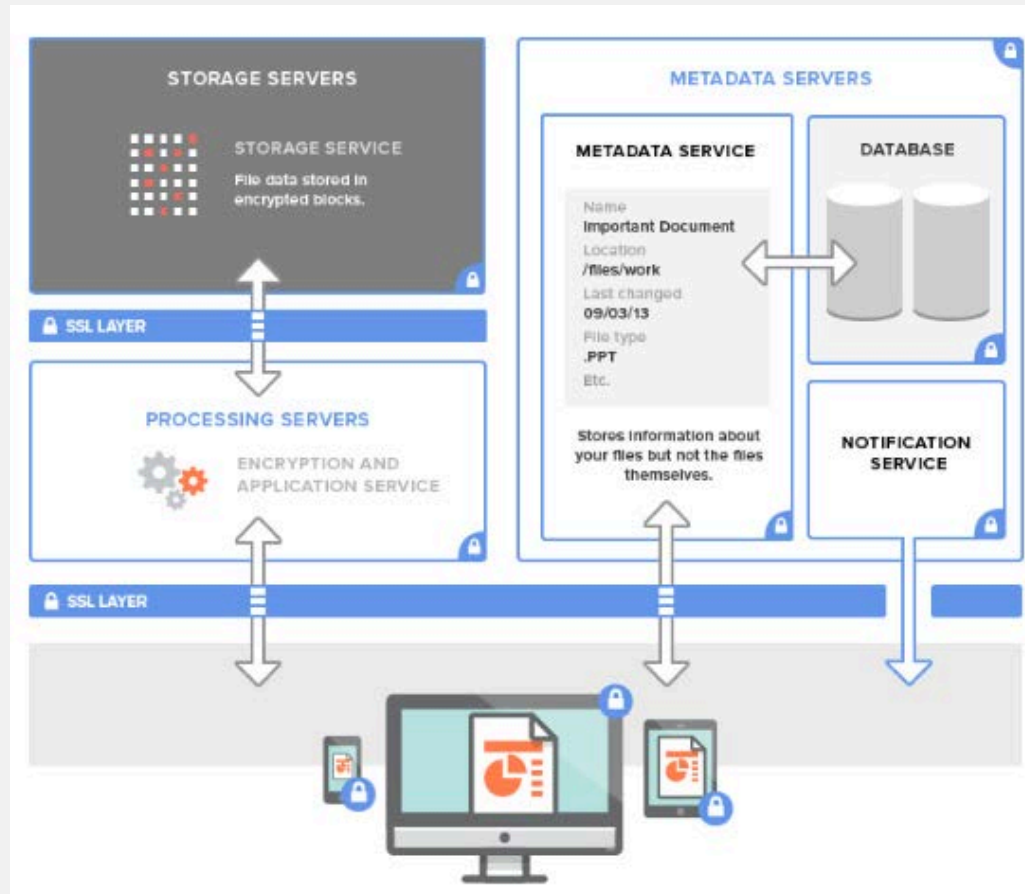
Dropbox Cloud API

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Cloud Storage

- One interesting case study is Dropbox

- Dropbox offers cloud file storage
  - Easily synced across multiple devices
  - Accessible through web interface, mobile apps, and directly integrated with the file system on PCs

- Dropbox itself uses clouds!
  - Metadata stored in Dropbox servers
  - Actual files stored in Amazon S3
  - Amazon EC2 instances run the logic

Dropbox Architecture
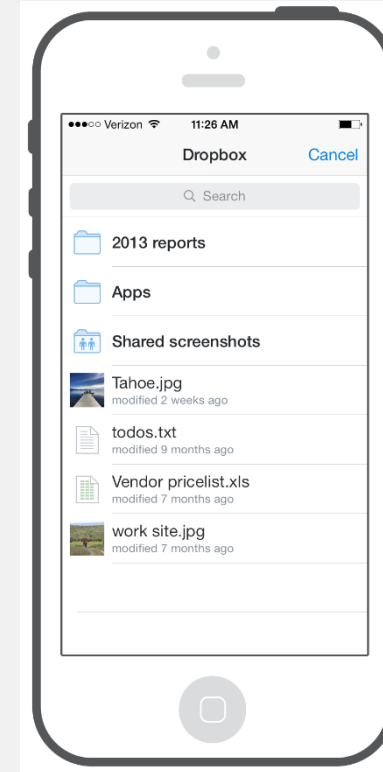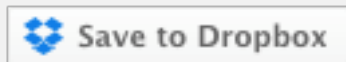
Dropbox API

- Two levels of API access to Dropbox
    - Drop-ins
        - Cross-platform UI components that can be integrated in minutes
        - *Chooser* allows instant access to files in Dropbox
        - *Saver* makes saving files to Dropbox easy
    - Core API
        - Support for advanced functionality like search, revisions, and restoring file
        - Better fit for deeper integration

Drop-In API

- Simple objects
  - *Chooser* available for JavaScript, Android and iOS
  - *Saver* on web and mobile web
- Handles all the authentication (OAuth), file browsing
- Chooser object returns the following:
  - Link: URL to access the file
  - File name
  - File Size
  - Icon
  - Thumbnails
- Saver
  - Pass in URL, filename and options

Core API

- Many languages and environments
  - Python, Ruby, PHP, Java, Android, iOS, OS X, HTTP
- Based on HTTP and OAuth
  - OAuth v1, OAuth v2
- Low-level calls to access and manipulate a user's Dropbox account
  - Create URL schemes
  - Upload files
  - Download files
  - List files and folders
  - Delta
  - Metadata access
  - Create and manage file sharing