A Distributed Example
File Transfer Interface
The User's Logical View Of The System

User's Logical View

- Transfer options: get (subscribe, request), add, replace, delete, rename
- Address by file type
- Add auxiliary functions when necessary: CRC, encryption, compression

File Type Information is used to

- Find a network address in the interfaces file.
- Locate the physical directory where a file is located.
- Check file access: Does the user have a "role" that will allow him or her to carry out the requested transfer on this file type?
Adding Servers For Performance Or Other Reasons
Physical configuration changes but logical view remains the same

Diagram:
- `/fei/proclmage`
  - `File_1`
  - `File_2`
- `/Users/fei/rawImage`
  - `File_1`
  - `File_2`
  - `File_n`
  - `FEI Server_1`
    - `service thread_1`
    - `service thread_2`
    - `dbms thread`
- `Updated FEI Database`
- `dbms thread`
  - `FEI Server`
    - `service thread_1`
    - `service thread_2`
    - `service thread_3`
- `client App`
  - `(no code changes)`
  - `API`
  - `Lookup network address for file type`
  - `rawImageFile`
    - `network address`
    - `processedImage`
    - `network address`
    - `New FEI interfaces file`
Subscription & Automation
Requests
"Subscription Lite" + Demon Processing

- Only file type and file name information sent after Demon processing completes.
- Look at meta-data to determine if the file is valuable.
- Get the file from FEI if it is.
- Example: Send me only the images that depict features with n a specified attitude and longitude range.
Managing A System
FEI Administration

- All FEI configuration data is stored in a database
- Resource Manager—A connection that reports on status of a server.
- Hot Boot—Change the configuration of a server while it’s running.
- Significant Events—Error conditions and other events are written to a database table from which they can be automatically displayed to users who have issued a sigEvent registered procedure (Sybase version only).
FEI Security
Kerberos Authentication, Access by "Role"

Access information is in the database
1. No OS privileges needed by user
2. Move file type and access capabilities remain unchanged

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