**Use Case Specifications**

Use Case ID: DFS0001  
Use Case Name: User Identification and Authentication

Relevant Requirements: Random Id and password that is 10-16 characters in length.

Primary Actor: User

Pre-conditions: User wants to login.

Post-conditions: Server grant access to files and file list.

Basic Flow or Main Scenario:

User attempts login with credentials:

1. User provides credentials to system
2. System validates credentials with user list
3. System returns result of login validation
4. System logs result

User with invalid credentials:

1. Failure count is incremented
2. System prompts user that either the userid or password is incorrect
3. When failure count reaches 6 userid is locked out

User with valid credentials:

1. System initializes client

Extensions or Alternate Flows: System access controls

Exceptions:

Related Use Cases:

Use Case ID: DFS0002  
Use Case Name: List all available files

Relevant Requirements: User can list available files

Primary Actor: User

Pre-conditions: Valid User Identification and Authentication

Post-conditions: A list of available files

Basic Flow or Main Scenario:

User requests list of available files:

1. User requests list of files
2. System returns list of available files
3. System asks if user would like to get a file

Extensions or Alternate Flows: None.

Exceptions:

Related Use Cases: DFS0001, DFS0003

Use Case ID: DFS0003  
Use Case Name: Get an available file

Relevant Requirements: User retrieve files

Primary Actor: User

Pre-conditions:

Valid User Identification and Authentication,

A file a user would like to retrieve

A directory to place files

Post-conditions: A file placed in the correct folder

Basic Flow or Main Scenario:

User requests an available file:

1. User gives system an index from file list
2. System locates location of file
3. System retrieves file from remote system
4. System places file in designated folder

Extensions or Alternate Flows: None.

Exceptions:

Related Use Cases: DFS0001, DFS0003

Use Case ID: DFS0004  
Use Case Name: Client initialization

Relevant Requirements:

System will store files in a hidden folder

System will retrieve files to a given folder

Primary Actor: User

Pre-conditions:

Valid User Identification and Authentication,

Post-conditions:

Client system has directories initialized

Server knows what files are available on system

Basic Flow or Main Scenario:

Storage folder is initialized:

1. Client verifies storage folder exists
   1. If folder does not exist client creates it.
2. Client marks files as accessible in the server
3. Client sets permissions on storage folder

Retrieval folder is initialized:

1. Client verifies retrieve folder exists
   1. If folder does not exist client creates it.
2. Client sets permissions on storage folder

Extensions or Alternate Flows: None.

Exceptions:

Related Use Cases: DFS0001

Use Case ID: DFS0005  
Use Case Name: Menu user interface

Relevant Requirements: User can interact with system to list, upload and retrieve files

Primary Actor: User

Pre-conditions:

Valid User Identification and Authentication,

A file a user would like to retrieve

A directory to place files

Post-conditions: A file placed in the correct folder

Basic Flow or Main Scenario:

User requests an available file:

1. User gives system an index from file list
2. System locates location of file
3. System retrieves file from remote system
4. System places file in designated folder

Extensions or Alternate Flows: None.

Exceptions:

Related Use Cases: DFS0001, DFS0003

Use Case ID: superiorLogin  
Use Case Name: Superior login

Relevant Requirements: Random Id and password that is 10-16 characters in length.

Primary Actor: Manager/IT

Pre-conditions: Manager/IT want to login.

Post-conditions: Server grant access to files and config.

Basic Flow or Main Scenario:

User with valid credentials, no permissions granted:

1. User provides valid credentials but account has no permissions granted.
2. System responds by allowing login but denying access Pump Control or System Logs.

User with Operator account credentials:

1. User tries to log in to Operator account
2. System responds by granting Operator-level permissions to the user.

User with Supervisor account credentials:

1. User tries to log in without any permissions granted
2. System responds by denying the login.

Extensions or Alternate Flows: None.

Exceptions:

Related Use Cases:

Use Case ID: serverLogs  
Use Case Name: Server logs

Relevant Requirements: update every action that is run by server with time stamp.

Primary Actor: Server

Pre-conditions: Read in log file.

Post-conditions: Server logged action.

Basic Flow or Main Scenario:

User with valid credentials, no permissions granted:

1. User provides valid credentials but account has no permissions granted.
2. System responds by allowing login but denying access Pump Control or System Logs.

User with Operator account credentials:

1. User tries to log in to Operator account
2. System responds by granting Operator-level permissions to the user.

User with Supervisor account credentials:

1. User tries to log in without any permissions granted
2. System responds by denying the login.

Extensions or Alternate Flows: None.

Exceptions:

Related Use Cases:

Use Case ID: retrieveFile  
Use Case Name: Retrieve file.

Relevant Requirements: Valid file and credential.

Primary Actor: User

Pre-conditions: User want specific file.

Post-conditions: Server grant access to file.

Basic Flow or Main Scenario:

User with valid credentials, no permissions granted:

1. User provides valid credentials but account has no permissions granted.
2. System responds by allowing login but denying access Pump Control or System Logs.

User with Operator account credentials:

1. User tries to log in to Operator account
2. System responds by granting Operator-level permissions to the user.

User with Supervisor account credentials:

1. User tries to log in without any permissions granted
2. System responds by denying the login.

Extensions or Alternate Flows: None.

Exceptions:

Related Use Cases:

Use Case ID: uploadFile  
Use Case Name: Upload File

Relevant Requirements: Valid credential and original name.

Primary Actor: User

Pre-conditions: User want to upload file.

Post-conditions: Server grant saved file and distribute file to nodes.

Basic Flow or Main Scenario:

User with valid credentials, no permissions granted:

1. User provides valid credentials but account has no permissions granted.
2. System responds by allowing login but denying access Pump Control or System Logs.

User with Operator account credentials:

1. User tries to log in to Operator account
2. System responds by granting Operator-level permissions to the user.

User with Supervisor account credentials:

1. User tries to log in without any permissions granted
2. System responds by denying the login.

Extensions or Alternate Flows: None.

Exceptions:

Related Use Cases:

Use Case ID: uploadFile  
Use Case Name: Upload File

Relevant Requirements: Valid credential and original name.

Primary Actor: User

Pre-conditions: User want to upload file.

Post-conditions: Server grant saved file and distribute file to nodes.

Basic Flow or Main Scenario:

User with valid credentials, no permissions granted:

1. User provides valid credentials but account has no permissions granted.
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User with Operator account credentials:

1. User tries to log in to Operator account
2. System responds by granting Operator-level permissions to the user.

User with Supervisor account credentials:

1. User tries to log in without any permissions granted
2. System responds by denying the login.

Extensions or Alternate Flows: None.

Exceptions:

Related Use Cases:

Use Case ID: uploadFile  
Use Case Name: Upload File

Relevant Requirements: Valid credential and original name.

Primary Actor: User

Pre-conditions: User want to upload file.

Post-conditions: Server grant saved file and distribute file to nodes.

Basic Flow or Main Scenario:

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User with Supervisor account credentials:

1. User tries to log in without any permissions granted
2. System responds by denying the login.

Extensions or Alternate Flows: None.

Exceptions:

Related Use Cases:

Use Case ID: uploadFile  
Use Case Name: Upload File

Relevant Requirements: Valid credential and original name.

Primary Actor: User

Pre-conditions: User want to upload file.

Post-conditions: Server grant saved file and distribute file to nodes.

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Extensions or Alternate Flows: None.

Exceptions:

Related Use Cases: