Local File System

1. Input_1.txt
2. Input_2.txt
3. Input_3.txt
   .
   .
   .
N. Input_N.txt

read

Lamport Clock

Content Server 1

Content Server 2

Content Server 3

Content Server N

Lamport Clock

Atom Feed XML N

PUT

Response

Message

Every 12 secs, Each Content Server will send a heartbeat message to Atom Server to tell the Atom Server that it is still alive.

Atom Feed XML 1

Atom Feed XML 2

Atom Feed XML 3

Combine

Aggregate.xml

Lamport Clock

GET

Response

Aggregate.xml

Client 1

Client 2

Client 3

Client N

Content Server Actions:

- Each Content Server will read the relevant input_?.txt file from the local file system and convert it into an Atom Feed XML document.
- Each Content Server will then send the Atom Feed XML document to the Atom Server through the PUT operation.
- Performs Lamport clock algorithm.

Atom Server Actions:

- Aggregate all the Atom Feed XML documents received from all the Content Servers into an Aggregate.xml file.
- **HeartBeat Operation:** every 12 seconds, the Content Server will send a heartbeat message to the Atom Server to signify that it is still alive.
- if any one of the Content Server stops sending a heartbeat message to the Atom Server, remove the relevant Content Server Atom Feed XML.

- else do nothing.
- Performs Lamport clock algorithm.

Client Actions:

- Each Client will send a GET request to the Atom Server to get the aggregated.xml back.
- Performs Lamport clock algorithm.