# FCUD

## Service Description

The service shall create, update or delete files on the filesystem upon receiving the corresponding valid request.

## Required Components

1. *Message Validation Service (MVS):* This is the accessible endpoint for the service. It will validate the incoming messages before forwarding it to the FCUD application. This needs to be built using C++.
2. *FCUD:* This will create, update, or delete the requested file. This needs to be built using C++.
3. *Broker:* AMQP broker that will facilitate communication between MVS and FCUD. RabbitMQ is a free open-source solution that can be used for this.

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## Message Validation Service Requirements

1. Shall be delivered as a binary that will run on an x64 Linux OS.
2. Shall listen on port 26292 for messages.
3. Shall connect to the AMQP broker on port 5672.
4. Shall validate all incoming XML messages with the following schema:

*<Message>*

*<Command>{“Create”/“Delete”}</Command> //Required*

*<FileName>{AlphaNumeric}[32]</FileName> //Required*

*<Content>{AlphaNumeric}[64]</Content> //Optional*

*</Message>*

1. Shall forward the message to fcud.input queue in the AMQP broker, if the message is valid.
2. Shall drop the message, if the message is not valid.

## FCUD Requirements

1. Shall be delivered as a binary that will run on an x64 Linux OS.
2. Shall connect to the AMQP broker on port 5672.
3. Shall listen on the fcud.input queue for incoming valid messages.
4. Shall have access to read and write to the following path in the filesystem (referred to as FCUD\_PATH):

*/usr/applications/fcud/files/*

1. Shall create a file with the filename given in the message in the FCUD\_PATH, if the command is “Create” and the file does not exist in the path.
   1. Shall write the content to the file, if it is present in the message.
2. Shall update the content of the file with the filename given in the message in the FCUD\_PATH, if the command is “Create” and the file exists in the path.
3. Shall delete the file with the filename given in the message in the FCUD\_PATH, if the command is “Delete” and the file exists in the path.

*\* Bonus Requirement: If time permits, containerize the MVS and FCUD applications using Docker.*