

## CHAPTER 4

### ANALYSIS AND DESIGN

#### 4.1 Analysis

The first step in building a streaming server is to go into the `usr/local/nginx/conf` folder by changing the `nginx.conf` file according to the ip-address on the server.

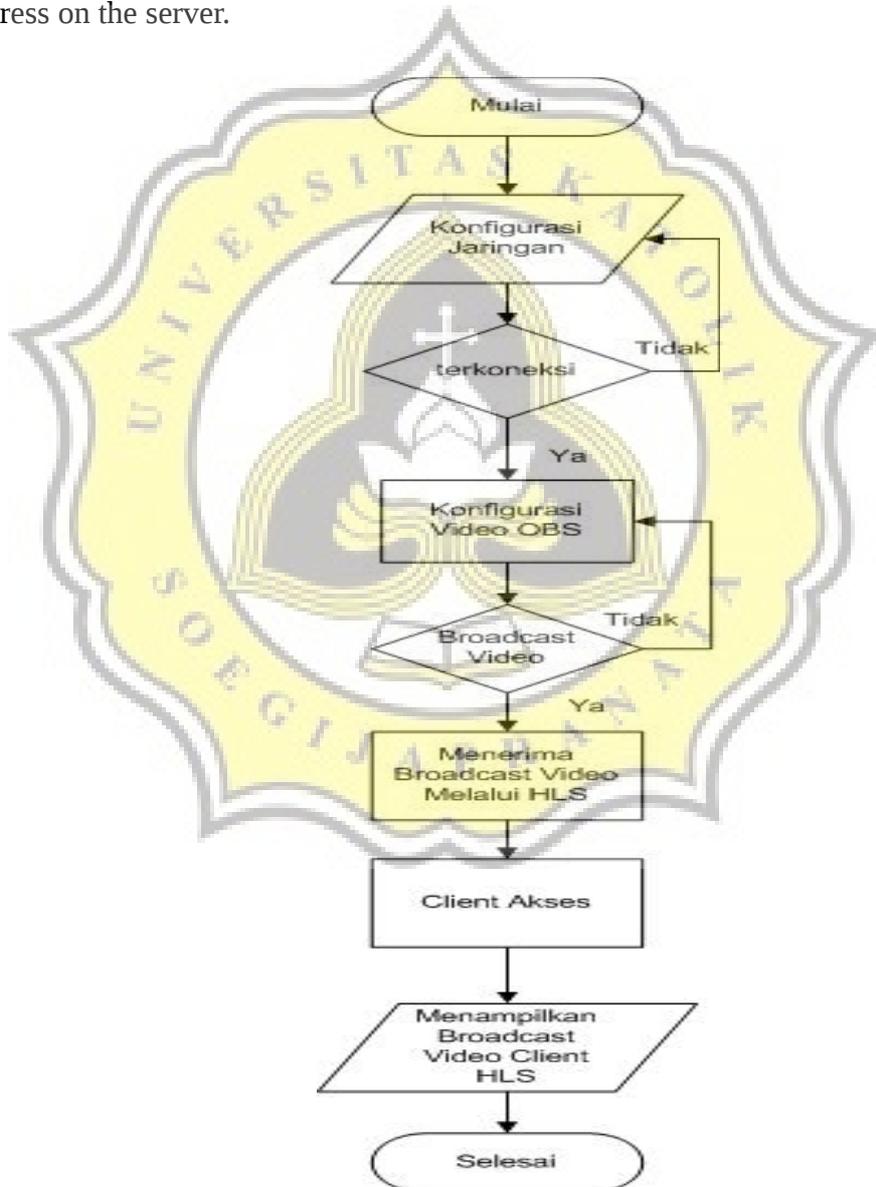


Illustration 4 1: Flowchart

First step is configuring the network on the Nginx server. When it is done correctly, it will automatically connect to any available networks. Otherwise, it will not be connected to any network, and need to be reconfigured. After connected to any available network, the admin has to configure the OBS (Open Broadcast System) program. The configuration will be asserted as true, if the video appears on the web browser. But, will be asserted as false, if the video does not appear on the web browser. Therefore, the OBS program needs to be reconfigured. The broadcasted video will be shown through the rtmp protocol line. Next, the broadcasted video will be received by the web interface through the HLS (HTTP Live Streaming) protocol. The next step is an access from the clients or another computers. Clients can access the broadcasted video through the browser after accessing the server address or DNS server. Finally, the broadcasted video will be shown in live using the HLS protocol as already available through the web browser media.

The software needed to support the streaming server are:

1. Linux operating system Ubuntu 14.04

The ubuntu operating system is used because of it's stability of process performance. Ubuntu may support the performance of many web server and applications such as the nginx web server. This operating system is easy to use and to operate.

2. Nginx Web Server.

In this project, Nginx Web Server is very important since it is a major part in building streaming server. This Web Server is used to display the streaming page in the browser. The advantage of Nginx Web Server is to have a stable streaming connection and an easy operation.

3. Nginx RTMP module

Real Time Messaging Protocol(RTMP) is a protocol used in this project as an access point to a web browser. RTMP has advantages that one of them is that it can be combined with nginx web server and can be used to play video through the web browser.

#### 4. Open Broadcast Studio (OBS)

Open Broadcast Studio (OBS) is very important in the making of this project because OBS application is used as a place to choose video or other media that will be display in streaming on web browser. OBS is selected in this project because it is one of the application that is easy to operate and to setup the server selection.

#### 4.2 Design

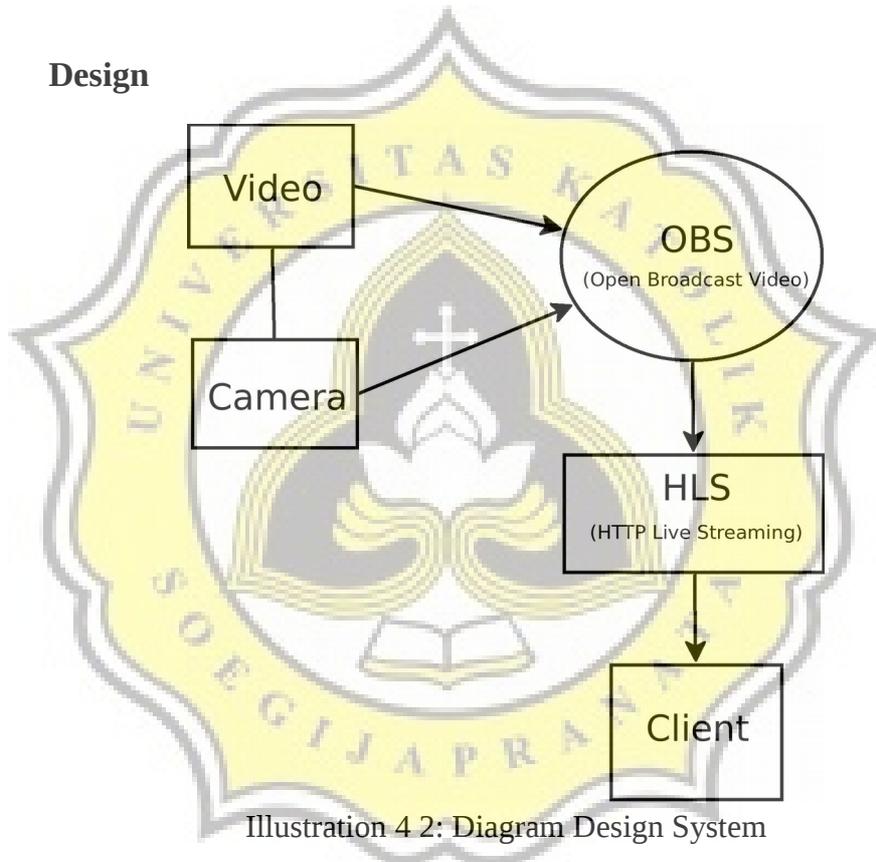


Illustration 4 2: Diagram Design System

From illustration 4.2, the design on the Streaming Video System is known. The design is by picking up the video from user or PC in OBS (Open Broadcast System) application. The video can also be obtained from streaming with camera devices. Once the video is saved in the OBS application, the video will be broadcast via HLS (Http Live Streaming), it is accepted by the clients.