CS380L: Lab 2

Sir Bedevere the Wise

March 2019

1 User-level File System

1.1 Implementation

1.1.1 System Architecture

I first built a large, hollow wooden rabbit. Now, Launcelot, Galahad, and I, wait until nightfall, and then leap out of the rabbit, taking the French by surprise – not only by surprise, but totally unarmed!

1.1.2 FUSE Calls Implemented

I only implemented three calls: "Ni!", "it", and "Ecky-ecky-ecky-ecky-pikang-zoom-boing-mumble-mumble". For the first call, I go and get a shrubbery. For the second and third calls, I fart in your general direction.

1.1.3 Miscellaneous

A year passed. Winter changed into Spring. Spring changed into Summer. Summer changed back into Winter. And Winter gave Spring and Summer a miss and went straight on into Autumn.

1.2 Evaluation

1.2.1 Experiment Design

Since witches are made of wood, and wood floats in water, then we can simply measure her weight. If she weighs the same as a duck, she must be a witch!

1.2.2 Results

As can be seen in figure 1, the average weight of the suspected witch was on average 128lbs, with a standard deviation of 5lbs. This means she weighs almost the same as a duck, so we can say with 95% confidence that she is a witch!

2 System Tools Exercises

A strace

Include the file session_record, and describe what you learned from this exercise.

B lsof

What kind of devices do you see listed? Sometimes you can use this trick to debug a lack of audio output. DO NOT include the output of this command.

C   Network Tools

Include the name of the interface your machine is using to communicate externally (¡eth0¿). Questions:

1. Are DHCP messages sent over UDP or TCP?

2. What is the link-layer (e.g., Ethernet) address of your host? (Feel free to obscure the last couple bytes for privacy's sake)

3. What is the IP address of your DHCP server?

4. What is the purpose of the DHCP release message?

5. Does the DHCP server issue an acknowledgment of receipt of the client's DHCP request?

6. What would happen if the client's DHCP release message is lost?