Formatting Submissions for a USENIX Conference: An (Incomplete) Example

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Abstract

The project entails deploying a robust web service securely and efficiently using Kubernetes (K8s) orchestration. This involves hosting Apache/Nginx servers housing an IP-to-Physical Address service and a weather service. Incorporating a multi-layered defense strategy, including honeypot mechanisms, and utilizing Sysdig for comprehensive logging ensures heightened security and real-time monitoring. Leveraging Kubernetes' scalability and resilience optimizes resource utilization and bolsters fault tolerance, facilitating seamless access and utilization of the critical web service with enhanced efficiency and reliability.

1 Introduction

intro goes here

2 Orchestration

This is a sample document, you next section should probably be "background" or "motivating example".

Footnotes should be places after punctuation characters, without any spaces between said characters and footnotes, like so.[1] And some embedded literal code may look as follows.

```
int main(int argc, char *argv[])
{
    return 0;
}
```

Now we're going to cite somebody. Watch for the cite tag. Here it comes. Arpachi-Dusseau and Arpachi-Dusseau co-authored an excellent OS book, which is also really funny [1], and Waldspurger got into the SIGOPS hall-of-fame due to his seminal paper about resource management in the ESX hypervisor [2].

[1]Remember that USENIX format stopped using endnotes and is now using regular footnotes.

The tilde character (~) in the tex source means a non-breaking space. This way, your reference will always be attached to the word that preceded it, instead of going to the next line.

And the 'cite' package sorts your citations by their numerical order of the corresponding references at the end of the paper, ridding you from the need to notice that, e.g, "Waldspurger" appears after "Arpachi-Dusseau" when sorting references alphabetically [1, 2].

It'd be nice and thoughtful of you to include a suitable link in each and every bibtex entry that you use in your submission, to allow reviewers (and other readers) to easily get to the cited work, as is done in all entries found in the References section of this document.

Now we're going take a look at Section 6, but not before observing that refs to sections and citations and such are colored and clickable in the PDF because of the packages we've included.

3 Front end

The front end of the project was crafted using a combination of HTML, CSS, and JavaScript, which outputted an interactive user interface. HTML was utilized to structure the content, creating the skeleton of the web pages. CSS was used in styling this content and JavaScript was integral for form validations and fetching content from our services.

To bring this front-end framework to life, the application was deployed on a Flask server, utilizing Python to manage the backend operations. Flask, a lightweight and flexible web framework, allowed for the efficient handling of requests and responses, serving the HTML, CSS, and JavaScript files to our orchestration team to implement. Python's integration with Flask facilitated the creation of routes and endpoints, enabling our backend services to interact with the front end. The use of Flask and Python in the backend complemented the front-end technologies, resulting in a cohesive and well-integrated web application.

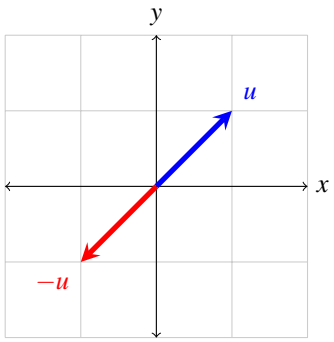

Figure 1: Text size inside figure should be as big as caption's text. Text size inside figure should be as big as caption's text. Text size inside figure should be as big as caption's text. Text size inside figure should be as big as caption's text. Text size inside figure should be as big as caption's text.

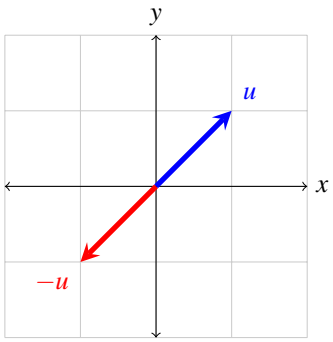

Figure 2: Text size inside figure should be as big as caption's text. Text size inside figure should be as big as caption's text. Text size inside figure should be as big as caption's text. Text size inside figure should be as big as caption's text. Text size inside figure should be as big as caption's text.

4 Services

The first service implemented in the project is a weather API designed to provide accurate and detailed weather forecasts by leveraging various web technologies and APIs. Built on a Flask server, this service efficiently handles user requests to deliver timely weather information. Users input a URL, which our system processes to retrieve the corresponding IP address. This IP address is then used to fetch the geographical location through a WHOIS lookup and the U.S. Census Bureau's geocoding service. By converting the address into latitude and longitude coordinates, we can accurately pinpoint the user's location.

Once the geographical coordinates are obtained, the service makes an API call to the National Weather Service (NWS) at weather.gov. The NWS API provides detailed weather forecasts based on the coordinates received. To optimize performance and reduce redundant API calls, the service implements caching mechanisms. This caching stores previously fetched weather data, ensuring that repeat requests for the same location are served quickly and efficiently. The integration of these components within the Flask framework not only streamlines the process but also ensures scalability and reliability, making our weather API service a robust tool for users seeking accurate weather information.

5 Logging

Here you may want your evaluation methodology...

Here's a typical reference to a floating figure: Figure 2. Floats should usually be placed where latex wants then. Figure2 is centered, and has a caption that instructs you to make sure that the size of the text within the figures that you use is as big as (or bigger than) the size of the text in the caption of the figures. Please do. Really.

In our case, we've explicitly drawn the figure inlined in latex, to allow this tex file to cleanly compile. But usually, your figures will reside in some file.pdf, and you'd include them in your document with, say, \includegraphics.

Lists are sometimes quite handy. If you want to itemize things, feel free:

fread a function that reads from a `stream` into the array `ptr` at most `nobj` objects of size `size`, returning returns the number of objects read.

Fred a person's name, e.g., there once was a dude named Fred who separated usenix.sty from this file to allow for easy inclusion.

The noindent at the start of this paragraph in its tex version makes it clear that it's a continuation of the preceding paragraph, as opposed to a new paragraph in its own right.

6 Defense

Here you may want your evaluation methodology...

Here's a typical reference to a floating figure: Figure 2. Floats should usually be placed where latex wants then. Figure2 is centered, and has a caption that instructs you to make sure that the size of the text within the figures that you use is as big as (or bigger than) the size of the text in the caption of the figures. Please do. Really.

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References

[1] Remzi H. Arpaci-Dusseau and Arpaci-Dusseau Andrea C. *Operating Systems: Three Easy Pieces*. Arpaci-Dusseau Books, LLC, 1.00 edition, 1111. http://pages.cs.wisc.edu/~remzi/OSTEP/.

[2] Carl A. Waldspurger. Memory resource management in VMware ESX server. In *USENIX Symposium on Operating System Design and Implementation (OSDI)*, pages 181–194, 2222. https://www.usenix.org/legacy/event/osdi02/tech/waldspurger/waldspurger.pdf.