

Submit a technical plan/road map for moving the entire network of a company (TROLL) to the cloud. Below is relevant information.

Troll Leadership / Development Team

- **Princess Poppy** - Leader of the Trolls and a visionary in offering “hugs-as-a-service” and developing ideas to offer Bergens happiness.
- **Branch** - Chief Information Security Officer for the Trolls. Branch is understandable paranoid and likes to have control and keep all IT in house. He does not like Cloud Guy, I mean who wears socks with no shoes?
- **Cloud Guy** – Chief Information Officer for the Trolls. Cloud Guy leaders the Troll’s IT vision and wants to move the Trolls into the cloud and take advantage of the services that cloud environment can offer. Cloud Guy has hired you as a consultant to help develop a secure cloud implementation for the Troll’s website and to get buy in from Branch.
- **Smidge** – System administrator
- **Guy Diamond** – Web developer
- **Biggie** – Network engineer
- **Cooper** – Web developer / System administrator

Technical Background

Capitalizing on the massive demand for anything Troll-related, the Trolls began to offer videos of their escapades to Bergens from their website **ENPM809J Troll World**. The site sells videos on demand to Bergen customers all around the world. The site quickly went viral and has since suffered downtime and other issues due to their popularity.

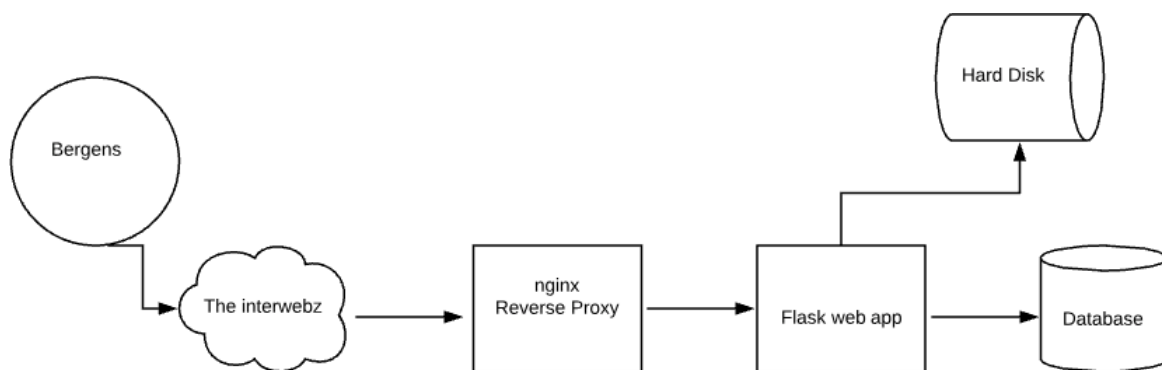
Due to a failure to properly backup the site and do proper code versioning the original site was lost and the current site was quickly written to get content back online. The entire site currently runs on a single Linux host, a copy of which has been provided as the virtual machine in the “**Project**” folder. The code is written in Python3 and Flask (web framework written in Python) with nginx acting as a reverse proxy between the code and the user.

The site as presented to you does not actually offer video on demand or process credit cards – **PRETEND IT DOES.**

Current Issues To Consider

- Firm do not currently have a patching strategy
- Firm do not currently have a backup strategy
- Firm do not currently have an account permission strategy, every use has the ability to run privileged commands on the web server if they want to
- Their entire website infrastructure is highly vulnerable to DDoS, hardware failures, and troll error
- The website has experienced DDoS attacks and compromise attempts
- Website has slow downloads and order processing speed.

Current Website Architecture



Customer comes over the Internet and connects to an nginx reverse proxy running on port 80. That forwards to the web app (written in Python with the Flask web framework) on port 5000. A MySQL database is running on 3306 for storage of queries. Media for the video-on-demand is stored locally on the hard drive of the web server. The code is also available here:

<https://github.com/kts262/enpm809j>

Appendix – Site Pages

Index (static content)



Hello, welcome to ENPM809J Troll World!!

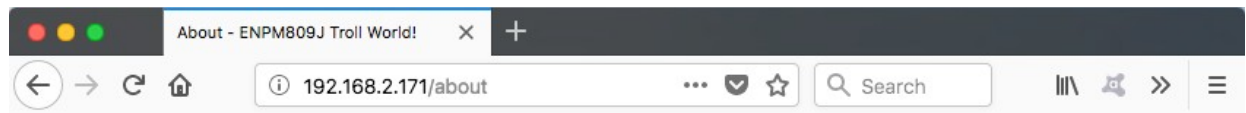
[Home](#) - [Videos](#) - [About](#) - [Leadership](#)

This the official site of the Trolls! Please check out our [video](#) collections and purchase as many videos as you think make sense!

We love making Bergens happy, have a great Troll day!

- Hugs, Princess Poppy

About (static content)



About Troll World

[Home](#) - [Videos](#) - [About](#) - [Leadership](#)

History

The trolls are small creatures who live in an almost perpetual state of happiness, singing, dancing and hugging all day long. However, they are discovered by the Bergens, large, grey, orge-like creatures who never feel happy but discover that they can feel happy for a moment if they eat a troll. The Bergens put the trolls and their tree in a cage, and hold an annual festival in which each Bergen gets its feeling of happiness by eating a troll. However, the trolls, led by their King Peppy, escape through underground tunnels on the day that the Bergen crown prince, Gristle, would taste his first troll. The furious Bergen king, Gristle Sr., banishes the minister in charge of the troll preparation and his Chef. Twenty years later, King Peppy's daughter, the extremely happy and optimistic princess Poppy, throws a big party to celebrate the trolls' escape, despite the fears and warnings of the glum and paranoid troll Branch that loud parties will attract the Bergens. Branch's fears are realized when indeed the banished Bergen The Chef sees the fireworks and captures a number of Poppy's closest friends. After many challenges the trolls were able to show the Bergens that they can be happy outside of eating trolls and now the trolls and Bergens are best friends.

Now

Now the Bergens are obsessed with being happy and want anything and everything that trolls do. The trolls have developed this video on demand site with popular troll video clips to entertain and delight the Bergens.

192.168.2.171/about

Leadership (static content)



ENPM809J Troll World Leadership

[Home](#) - [Videos](#) - [About](#) - [Leadership](#)



Poppy - CEO

Poppy is the queen and CEO of the trolls. She is relentlessly upbeat and sets the corporate vision for the trolls. She loves hugs.

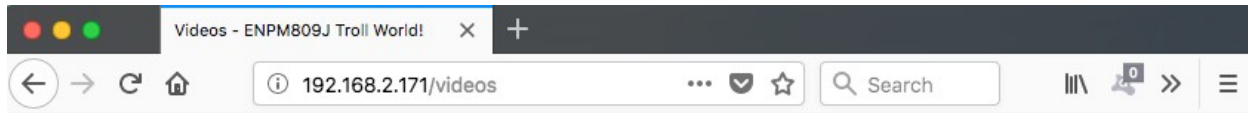


Branch - CISO and Head of Corporate Security

Branch is the over- cautious paranoid survivalist in Troll Village, who lives in fear of invasion from the Bergens. The only troll in the village who doesn't sing, dance, or hug, Branch lives a disgruntled existence, constantly trying to prepare for the worst. He's constantly flummoxed by the over- the- top positivity of the other Trolls - is he the only sane one in this crowd of exuberantly happy Trolls? He does not like the cloud.

Cloud Guy - Chief Architect

List of Videos (dynamic content)



Videos!

[Home](#) - [Videos](#) - [About](#) - [Leadership](#)

Professor note: Humor me and pretend these links to Youtube clips are actually links to purchase them as video-on-demand and there is a whole credit card processing part to this site.
Also feel free to watch some of the clips, they are funny.

"Can't Stop The Feeling!"



[Buy Video](#)

"Get Back Up Again"

Buy video (dynamic content)

