ID\_Project1\_EssaySubmission-Containers

Deploying containers as part of a cloud network is appropriate for defensive cybersecurity measures. Deploying containers has two basic benefits when deployed as part of a cloud network. First, containers minimize inbound traffic, naturally decreasing the risk of malicious cyberspace attacks on the network. Second, containers make configuring machines more efficient.

In a recent project I was responsible for configuring and securing a virtual cloud network., I deployed containers to maximize security and configure multiple machines at once. As part of a “fanning in” strategy, Using ssh connections, I deployed a Jump Box to act as a gateway into the secure network environment. Using Ansible and ELK, I then configured a load balancer to handle http traffic, network security groups, several virtual machines as servers, and an ELK server. Containers allowed the quick and safe deployment and configuration of several network resources secured behind firewalls with active traffic and system resource monitoring.

This was an appropriate use for containers because it maximizes both network security and network resource efficiency. Using Ansible and Dockers, I was able to ssh into the machines that were otherwise blocking traffic. Once containers were attached, several firewalls, security rules, ELK servers, and other resources were deployed in a controlled manner which minimized inbound traffic while monitoring http and ssh traffic. The network machines were selected according to their status as a ‘webserver’ or ‘elk’ machine. Using playbooks, Ansible and ELK machines configured dockers, filebeat, and metricbeat systems accordingly.

Without containers, setting up a virtual network with several machines and using minimal resources to do so would not be possible. Without containers, inbound traffic could be more of a risk and resources could not be deployed as efficiently or across regions as quickly. However, using containers maximizes security at the expense of usability. Not using containers could result in increased accessibility and production as users face less obstacles. As always, weighing security objectives against business goals is critical in determining a company’s security policy..