Docker Containers

Docker Containers is a relatively new technology that has been on the market for roughly 10 years. Since it's deployment, the use of the technology has proven to be very beneficial for many tech projects. As a result of my specific project, I used containers for a variety of reasons. Specifically, I used 4 containers in my project called Ansible, Filebeat, Metricbeat and ELK.

Ansible-I installed this container on my jumpbox to run as a control node for my other two Web VM's. Essentially, by having this container, I could configure my other two machines seamlessly.

Filebeat-Filebeat is a lightweight shipper for forwarding and centralizing log data. It monitors the specified log files/locations, collects log events, and forwards them to Elasticsearch or Logstash for indexing. (www.elastic.co). Unlike my jumpbox, I installed filebeat through my ansible container.

Metricbeat-Metricbeat is a lightweight shipper that you can install on your servers to periodically collect metrics from the operating system and from services running on the server. Metricbeat takes the metrics and statistics that it collects and ships them to the output that you specify, such as Elasticsearch or Logstash. Metricbeat helps you monitor your servers by collecting metrics from the system and services running on the server (www.elastic.co). Also, just like Filebeat, I installed metricbeat through my container.

Elk Container- provides a convenient centralised log server and log management web interface, by packaging Elasticsearch, Logstash, and Kibana, collectively known as ELK

Without the use of a container, deploying and configuring is still possible, however, the process would be different. Instead of using a container to configure multiple servers at once, I would have to go into each machine and configure them separately. This process has many disadvantages. Disadvantages include time needed to configure each machine, the possibility of configuring one machine differently than the others. On the other hand, there are many advantages to using containers. Likewise, the advantage of using containers is having the ability to simultaneously configure all machines with the exact same configurations through the control node. This ensures security settings are all the same, time can be devoted to other tasks, and cost savings.