**High Availability**

The process of making sure a resource is available at all times

* Usually done by chaining multiple resources to look like one
  + i.e., multiple servers that each have the same information/resources

**Replication**

* Replication of data between servers
  + Allows servers to contain same configs as well as services
* If 1 were to fail, the other can be put in its place without massive downtime

**VIPs**

* Virtual IPs
* Special type of IP that resolves physically to MAC address of 2 different hosts
* This is commonly used to keep a service up as there can be any number of duplicates behind the VIP
* Can keep client talking to one end-point without having to change who they’re talking to

HA proxy

Apache Traffic Manager

**Proxys**

**What is a proxy?**

* Acts as a gateway between a client and an end-point
* Sits in between and allows traffic to pass through
  + Can filter traffic, hide traffic etc.
* Can also get access to blocked resources through this

**Reverse Proxy**

Commonly used for load balancing or HA

* Allows client to interface with thousands of servers through one endpoint/IP
* HA proxy is a good example of this

**The Demilitarized Zone**

Often called the **Perimeter Network**

* Special type of network that allows access to the internet, but not the internal network
* Commonly used to host email servers or web servers
* A firewall is the device that controls the rules for the DMZ