

Topic

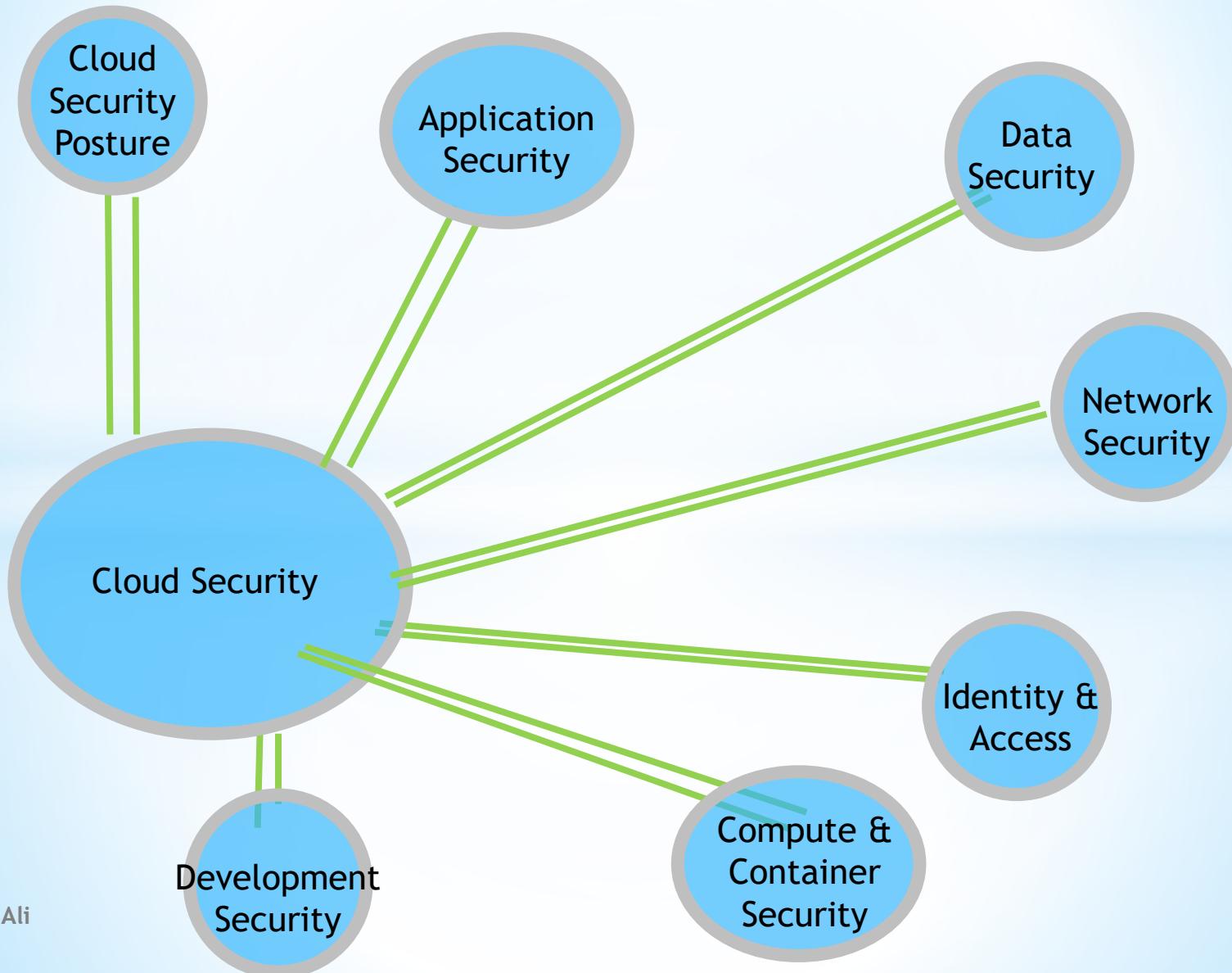
# \* Cloud Security

TOCI III Course

CS Department @ University of Karachi

# Cloud Security Domains

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# Cloud Security Domains

## Data Security

- Data Safe
- Certificates
- Data Loss Prevention DLP
- Vaults & Secrets (KMS)

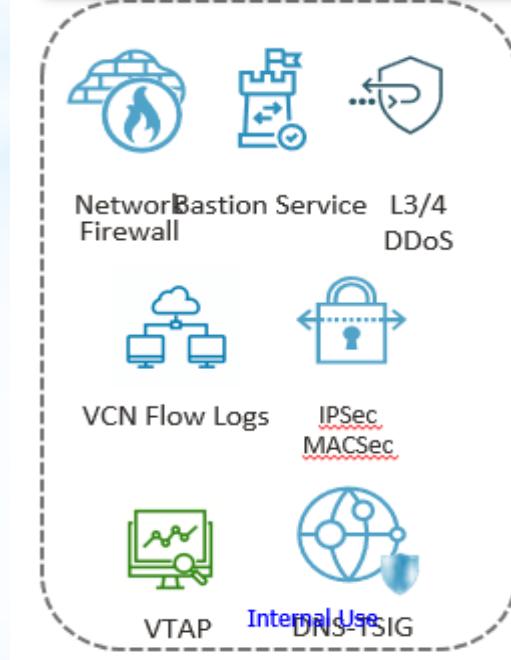
### Data Security



## Network Security

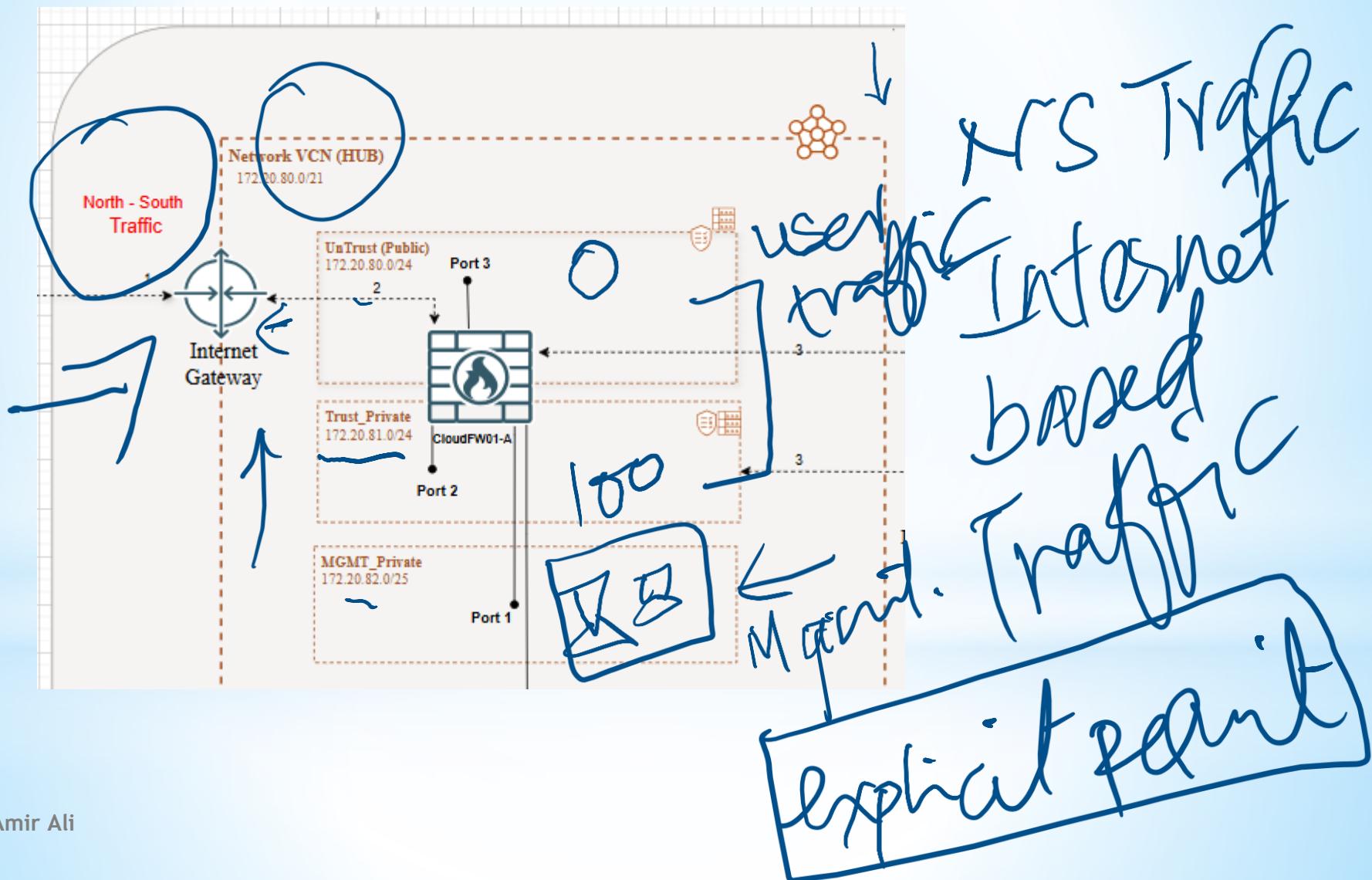
- Network Firewall
- Bastion Service
- L3/4 DDoS
- IPSec, MACSec
- DNS TSIG (Shared secrets)

### Network Security

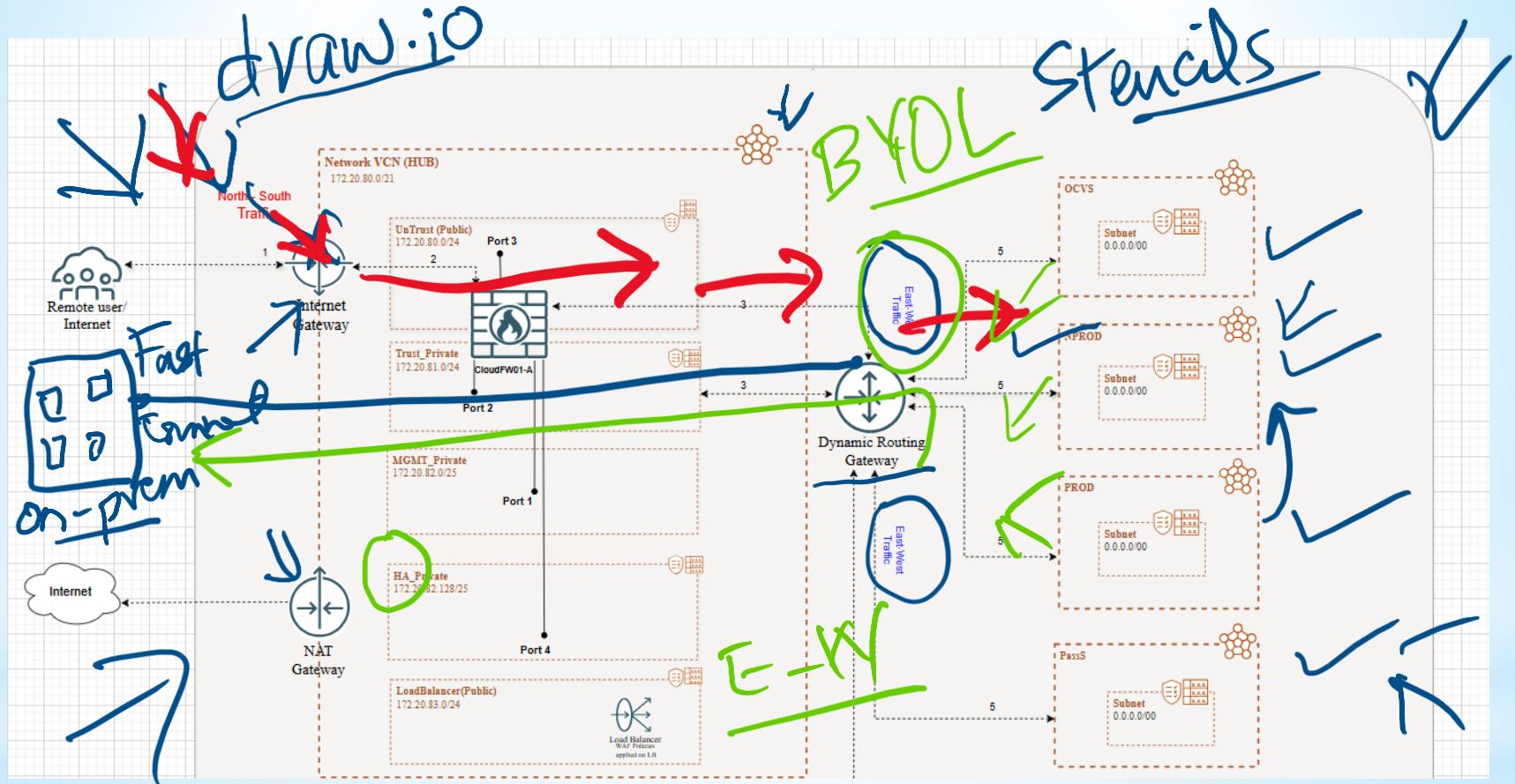


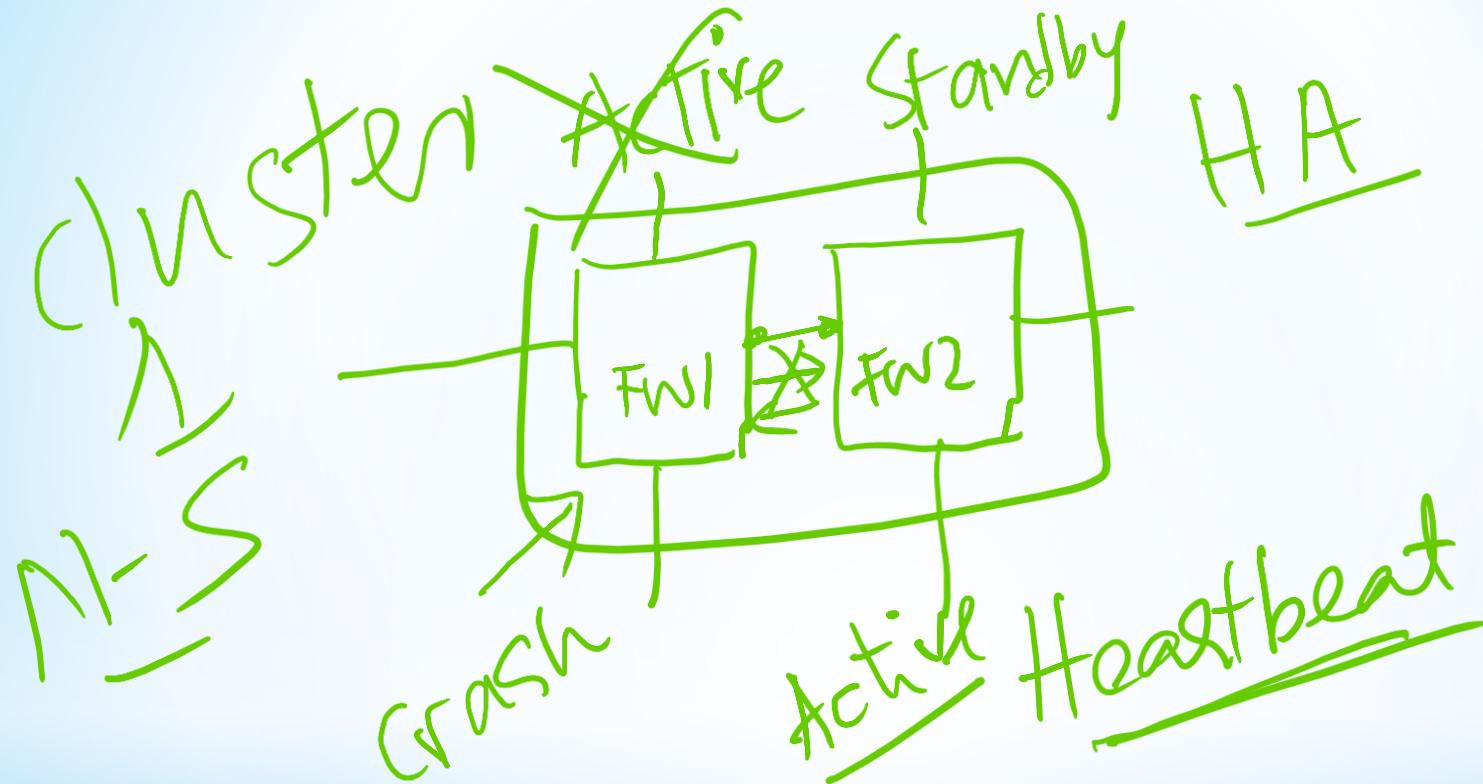
# Cloud Firewall

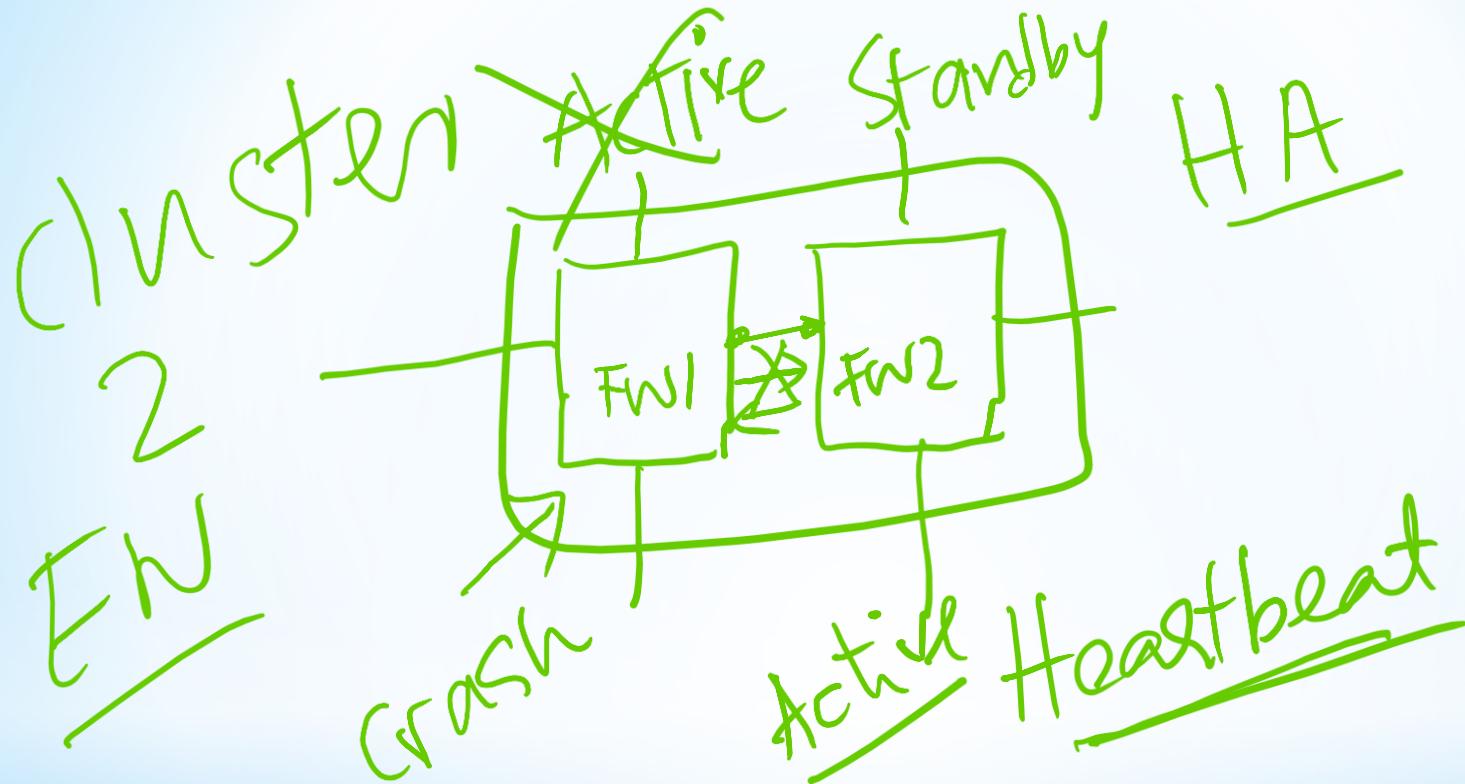
implicit deny

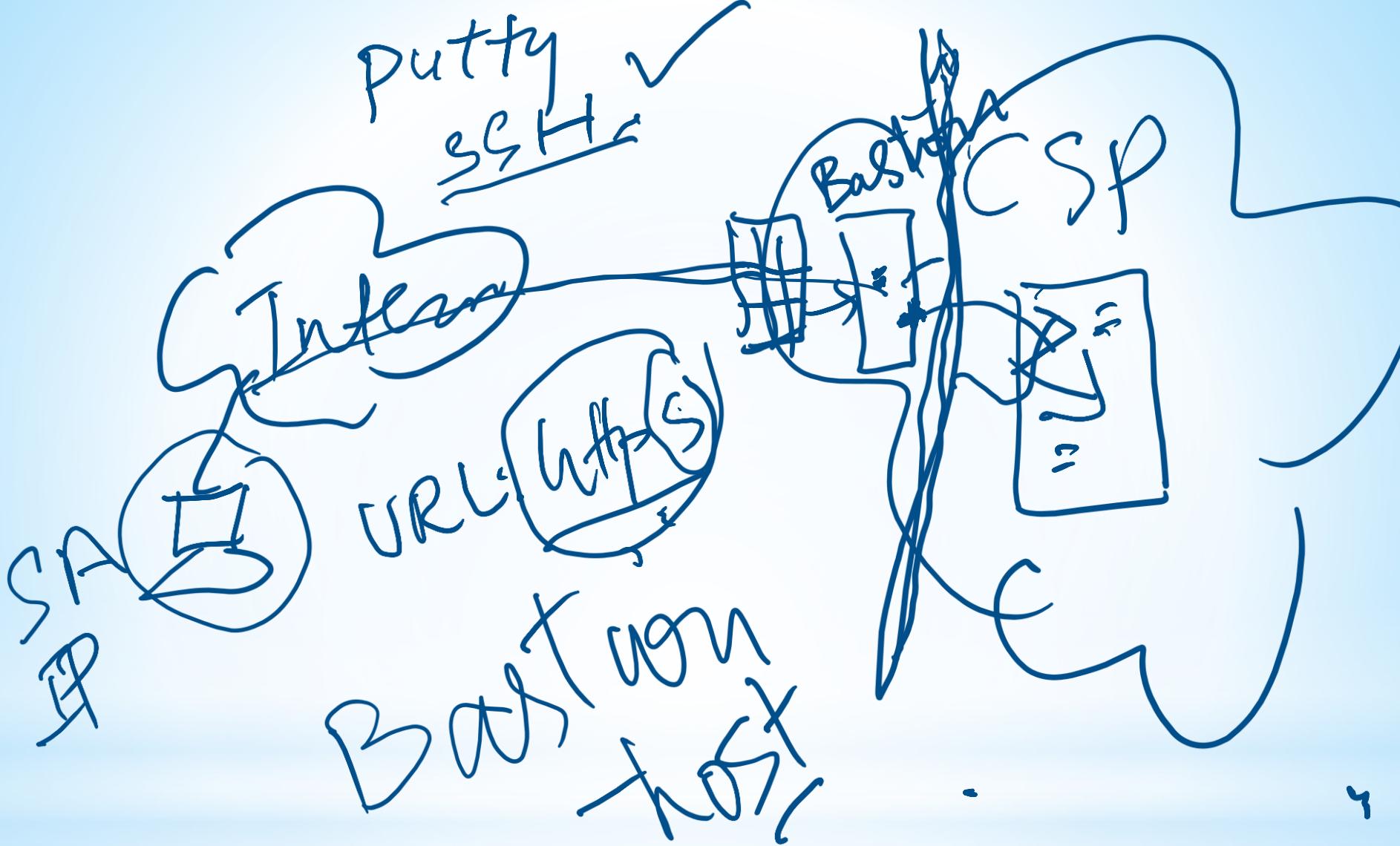


# Cloud Secure Landscape









# Types of Firewall

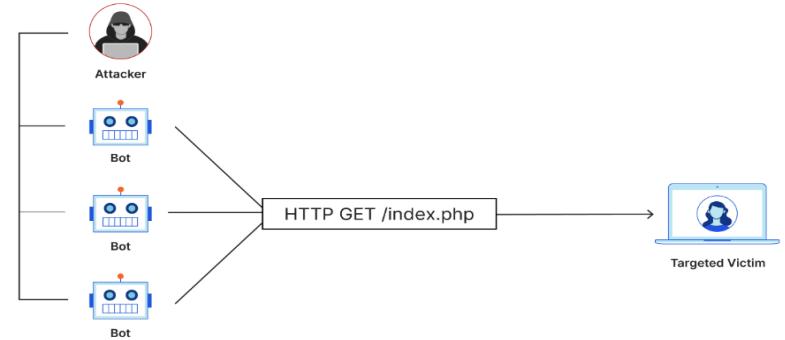
- What is Firewall
- Firewall Connectivity (East/West) (North/South)
- Firewall types
- NextGen Firewall
- Web Access Firewall
- Anti DDoS

# Authentication & Authorization

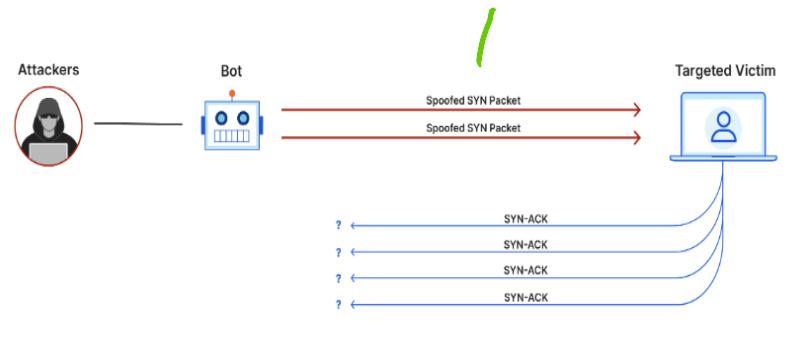
- What is Authentication
- Multi-factor authentication
- Role Based Access
- Identity Access Management

# DDoS Types

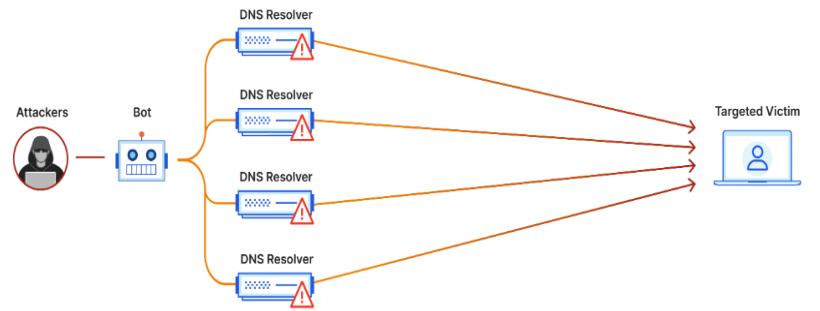
- Application DDoS attacks



- Volumetric attacks

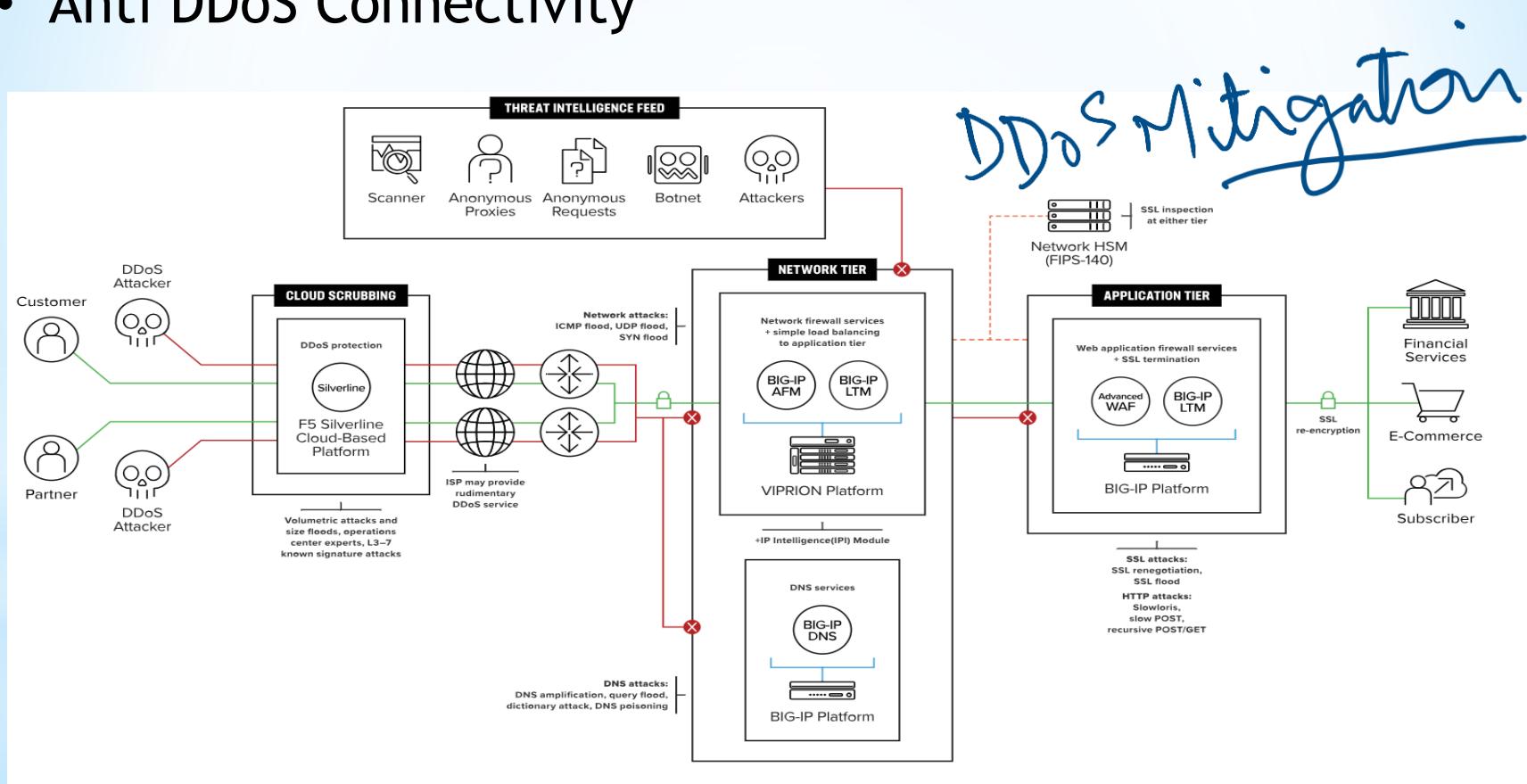


- DNS Amplification



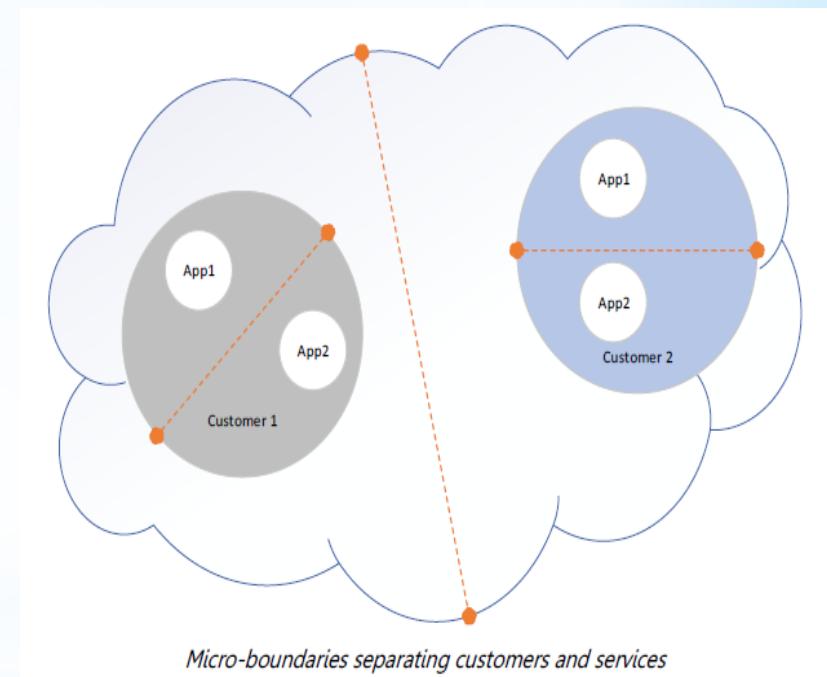
# Anti DDoS

- What is Anti DDoS
- Why we need to protect from Anti DDoS
- Anti DDoS Connectivity



# Network Security Perimeter

- Physical security ensures underlying physical resources protection
- Logical security consists link, protocol & application layer
- Perimeter is the demarcation point for some Cloud
- Other cloud perimeter is network dynamic around individual customer solutions or services



# Cloud Security Tools

| S.No. | Suggested Solution                  | Domains to be covered                                |
|-------|-------------------------------------|--|
| 1     | ManageEngine                        | Comprehensive Monitoring & Management for hosted VMs |
| 2     | ManageEngine Servicedesk plus       | Helpdesk/Ticketing/Incident Management               |
| 3     | Trend Micro Deep Security           | Antivirus & Anti Malware                             |
| 4     | Patch Manager Plus                  | Patch Management Solution                            |
| 5     | Tenable                             | Vulnerability Assessment                             |
| 6     | ManageEngine Log360                 | SIEM   |
| 7     | Symantec EndPoint & File Encryption | Encryption Solution                                  |
| 9     | Kasten                              | Backup Solution for Openshift                        |
| 10    | Veeam                               | Backup Solution for VM                               |
| 11    | Prisma Cloud                        | End Point Security                                   |
| 12    | Fortigate                           | Firewall   |

# Q & A