ASA Deep Dive

NAT

Configuring Static NAT

- Static NAT translates a single real address to a single mapped address that is routable on the destination network.
- Static NAT is bi-directional.
- Static PAT is uni-directional.
- Static NAT
  - Example 1
    - In this example when 10.0.0.1 that is behind inside segment accesses any destination on the outside segment, the source 10.0.0.1 would be translated to IP address 20.0.0.1. The Source Port, Destination Port and Destination IP remains unchanged.
    - Also when any source from the outside segment accesses the public translated IP address 20.0.0.1 the destination 20.0.0.1 would be translated to private IP address 10.0.0.1. However, you would need an access-list to permit from a lower security level to a higher security level.

```
object network OBJECT-REAL
 host 10.0.0.1
object network OBJECT-MAPPED
 host 20.0.0.1

nat (INSIDE,OUTSIDE) source static OBJECT-REAL OBJECT-MAPPED
```

Configuring Static NAT

- Static PAT
  - Example 2
    - In the example when 10.0.0.1 who is behind inside accesses any destination on the outside segment for destination port 23, the source 10.0.0.1 would be translated to 20.0.0.1. The Source port and Destination port and Destination IP remains unchanged. Source IP address is translated.
    - If in same example the service object is changed to source eq 23, instead of destination eq 23, then it becomes reverse, which means when any source on the outside segment accesses the public IP address 20.0.0.1 for destination port 23 then the Destination IP address would change to 10.0.0.1. The source port, and destination port and Source IP remains unchanged. However you need additional ACL for Lower to Higher security level.

```
object service O23
 service tcp destination eq telnet
object network OBJ-REAL
 host 10.0.0.1
object network OBJ-MAPPED
 host 20.0.0.1

nat (INSIDE,OUTSIDE) source static OBJ-REAL OBJ-MAPPED service O23 O23
```