Deliverable 1. Take a screenshot of the output that shows some of the SNMP values from fw01 (note the nslookup to make sure of the hostname). The output should look similar to this:

```
[seraphim@nmon01-seraphim ~]$ snmpwalk -Os -c SYS265 -v2c fw01-seraphim system
sysDescr.0 = STRING: pfSense fw01-seraphim.seraphim.local 2.5.2-RELEASE FreeBSD 12.2-STABLE amd64
sysObjectID.0 = OID: enterprises.12325.1.1.2.1.1
sysUpTimeInstance = Timeticks: (2264) 0:00:22.64
sysContact.0 = STRING:
sysName.0 = STRING: fw01-seraphim.seraphim.local
sysLocation.0 = STRING:
sysServices.0 = INTEGER: 76
sysORLastChange.0 = Timeticks: (47) 0:00:00.47
sysORID.1 = OID: enterprises.12325.1.1.1.10.2
sysORID.2 = OID: enterprises.12325.1.1.1.10.3
sysORID.3 = OID: enterprises.12325.1.1.1.10.4
sysORID.4 = OID: snmpMIB
sysORID.5 = OID: enterprises.12325.1.1
sysORID.6 = OID: ifMIB
sysORID.7 = OID: ipMIB
sysORID.8 = OID: tcpMIB
sysORID.9 = OID: udpMIB
sysORID.10 = OID: ipForward
sysORID.11 = OID: enterprises.12325.1.2
sysORID.12 = OID: host
sysORID.13 = OID: ucdavis
sysORID.14 = OID: enterprises.12325.1.203
sysORDescr.1 = STRING: udp transport mapping
sysORDescr.2 = STRING: lsock transport mapping
sysORDescr.3 = STRING: inet transport mapping
sysORDescr.4 = STRING: The MIB module for SNMPv2 entities.
sysORDescr.5 = STRING: The MIB module for the Begemot SNMPd.
sysORDescr.6 = STRING: The MIB module to describe generic objects for network interface sub-layers.
sysORDescr.7 = STRING: The MIB module for managing IP and ICMP implementations, but excluding their management of IP rou
tes.
sysORDescr.8 = STRING: The MIB module for managing TCP implementations.
```

Deliverable 2. Provide the output from the following command run on nmon01.

```
[seraphim@nmon01-seraphim ~]$ snmpwalk -Os -c SYS265 -v2c fw01-seraphim system
sysDescr.0 = STRING: pfSense fw01-seraphim.seraphim.local 2.5.2-RELEASE FreeBSD 12.2-STABLE amd64
sysObjectID.0 = OID: enterprises.12325.1.1.2.1.1
sysUpTimeInstance = Timeticks: (166002) 0:27:40.02
sysContact.0 = STRING:
sysName.0 = STRING: fw01-seraphim.seraphim.local
sysLocation.0 = STRING:
sysServices.0 = INTEGER: 76
sysORLastChange.0 = Timeticks: (47) 0:00:00.47
sysORID.1 = OID: enterprises.12325.1.1.1.10.2
sysORID.2 = OID: enterprises.12325.1.1.1.10.3
sysORID.3 = OID: enterprises.12325.1.1.1.10.4
sysORID.4 = OID: snmpMIB
sysORID.5 = OID: enterprises.12325.1.1
sysORID.6 = OID: ifMIB
sysORID.7 = OID: ipMIB
sysORID.8 = OID: tcpMIB
sysORID.9 = OID: udpMIB
sysORID.10 = OID: ipForward
sysORID.11 = OID: enterprises.12325.1.2
```

Deliverable 3. Provide the output of the SNMP system values on ad01 with the following command

```
[seraphim@nmon01-seraphim ~]$ snmpwalk -Os -c SYS265 -v2c ad01-seraphim | wc -l
11977
```

```
[seraphim@nmon01-seraphim ~]$ snmpwalk -Os -c SYS265 -v2c ad01-seraphim system
sysDescr.0 = STRING: Hardware: Intel64 Family 6 Model 62 Stepping 4 AT/AT COMPATIBLE - Software: Windows Version 6.3 (Bu
ild 17763 Multiprocessor Free)
sysObjectID.0 = OID: enterprises.311.1.1.3.1.3
sysUpTimeInstance = Timeticks: (86992) 0:14:29.92
sysContact.0 = STRING:
sysName.0 = STRING: ad01-seraphim.seraphim.local
sysLocation.0 = STRING:
sysServices.0 = INTEGER: 76
```

Deliverable 4. Provide a screenshot from the tcpdump session on web01 that shows the clear text community string. Remember, anyone in a position to grab packets between nmon01 and the target can see this string.

```
[root@web01-seraphim ~]# sudo tcpdump -i ens192 port 161 -c10 -AAA
tcpdump: verbose output suppressed, use -v or -vv for full protocol decode
listening on ens192, link-type EN10MB (Ethernet), capture size 262144 bytes
11:09:05.259585 IP nmon01-seraphim.seraphim.local.55217 > web01-seraphim.seraphim.local.snmp:  C="SYS265" GetNextRequest
(26)  system
.PV.    ..PV.....E..E.;@.@.
.
...
........1..0'.....SYS265.............0.0
..+.......
11:09:06.261048 IP nmon01-seraphim.seraphim.local.55217 > web01-seraphim.seraphim.local.snmp:  C="SYS265" GetNextRequest
(26)  system
.PV.    ..PV.....E..E.a@.@.     u
...
........1..0'.....SYS265.............0.0
..+.......
11:09:07.262372 IP nmon01-seraphim.seraphim.local.55217 > web01-seraphim.seraphim.local.snmp:  C="SYS265" GetNextRequest
(26)  system
.PV.    ..PV.....E..E..@.@..E
...
........1..0'.....SYS265.............0.0
..+.......
11:09:08.263795 IP nmon01-seraphim.seraphim.local.55217 > web01-seraphim.seraphim.local.snmp:  C="SYS265" GetNextRequest
(26)  system
.PV.    ..PV.....E..E.q@.@..e
...
........1..0'.....SYS265.............0.0
..+.......
11:09:09.265178 IP nmon01-seraphim.seraphim.local.55217 > web01-seraphim.seraphim.local.snmp:  C="SYS265" GetNextRequest
(26)  system
.PV.    ..PV.....E..E.7@.@...
...
........1..0'.....SYS265.............0.0
..+.......
11:09:10.266581 IP nmon01-seraphim.seraphim.local.55217 > web01-seraphim.seraphim.local.snmp:  C="SYS265" GetNextRequest
(26)  system
.PV.    ..PV.....E..E.U@.@...
...
```

Deliverable 5: Tech Journal entry - This week's journal should include notes re: SNMP (in far more detail than the example). Make sure you include at least 3 topics/articles from the lecture or lab that you were unfamiliar with and your research results. Be sure to add your instructor's GitHub account as a collaborator if your wiki is not public.

https://github.com/seraphimgerber/SYS-265

Deliverable 6. Your deliverable meets the submission guidelines.