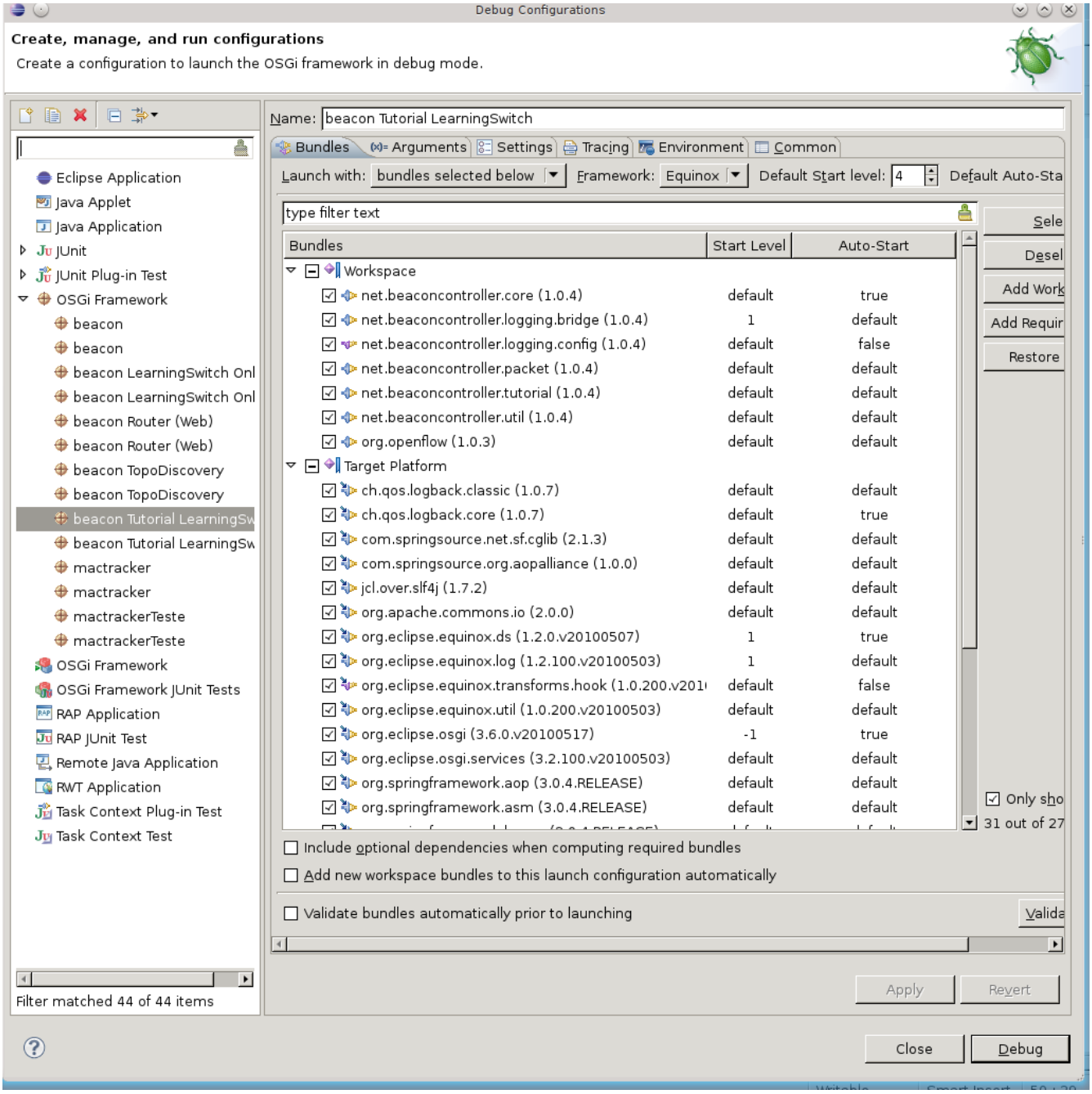
Of-IDPS

Steps for execute Of-IDPS tests:

1. Start the OpenFlow controller on Eclipse using *Eclipse/Run/DebugConfigurations*. Select "*beacon Tutorial LearningSwitch*" and click on *debug*. When OpenFlow controller is started it will be executing on 6633 TCP port. Have caution for do not start two or more OpenFlow controller in the same time, this is very common error, if this occur will appear a warn message informing that the port it's already in use, in this case use the command `netstat -a --tcp -np | grep 6633` to identify the OpenFlow controller process related with the port and then use the `kill` command to liberate this port.



2. *On the controller mount a `/mnt/armazem/openflow/tmp/alertas/` directory to use SSH to share the alerts from IDS, for this use the command:

```
$ sshfs mininet@192.168.1.200:/var/log/snort/ \
/mnt/armazem/openflow/tmp/alertas/
```

3. With Mininet Virtual Machine (VM) started:
   a) Sign in VM using SSH using IP 192.168.1.200 (you can configure this, on Mininet VM), user *mininet* and password *mininet*:

```
$ ssh -Y mininet@192.168.1.200
```

   b) Inside of SSH Mininet VM connection execute `mn` command to run tests. The controller must have the IP 192.168.1.113 (to change this IP, you must configure the file `cenarioTesteLAN-WAN.py`):

```
$ sudo mn –custom \
/home/mininet/mininet/custom/cenarioTesteLAN-WAN.py
```

Observation:
1 - For now, is recommended restart (stop and start) OpenFlow controller for each test.
2 - In the finish of each test the files with the result of tests will be in the VM, thus *tcpdump* files will be in `/var/log/tcpdump` directory and Snort files in `/var/log/snort` directory, all files names are composed by date and time of the begin of teste execution. On each test execution the Snort files are moved to backup directory `/var/log/bkpSnort`.

Resume:

Controller/eclipse – F11 – with "*beacon Tutorial LearningSwitch*"

```
*controler$ sshfs mininet@192.168.1.200:/var/log/snort/ \
/mnt/armazem/openflow/tmp/alertas/

controller$ ssh -Y mininet@192.168.1.200

mininet$ $ sudo mn –custom \
/home/mininet/mininet/custom/cenarioTesteLAN-WAN.py
```

* - Execute `sshfs` just one time, at the begin. Always verify if the `sshfs` is running okay.