

## SNMP Monitoring (SNMPManager.java)

```
import org.snmp4j.*;
import org.snmp4j.smi.*;
import org.snmp4j.transport.*;

public class SNMPManager {

    private static final String SNMP_HOST = "192.168.1.1";
    private static final String SNMP_COMMUNITY = "public";
    private static final String OID_SYSNAME = "1.3.6.1.2.1.1.5.0"; // System Name OID
    private static final String OID_IFSTATUS = "1.3.6.1.2.1.2.2.1.8"; // Interface Status OID

    public static void main(String[] args) throws Exception {

        // Fetch system name using SNMP
        String sysName = snmpGet(SNMP_HOST, SNMP_COMMUNITY, OID_SYSNAME);
        System.out.println("System Name: " + sysName);

        // Fetch interface status
        String ifStatus = snmpGet(SNMP_HOST, SNMP_COMMUNITY, OID_IFSTATUS);
        System.out.println("Interface Status: " + ifStatus);
    }

    private static String snmpGet(String host, String community, String oid) throws Exception {
        Snmp snmp = new Snmp(new DefaultUdpTransportMapping());
        snmp.listen();
        Target target = new CommunityTarget();
        ((CommunityTarget) target).setCommunity(new OctetString(community));
```

```
target.setAddress(new UdpAddress(host + "/161"));
target.setRetries(2);
target.setTimeout(1500);
PDU pdu = new PDU();
pdu.add(new VariableBinding(new OID(oid)));
pdu.setType(PDU.GET);

ResponseEvent response = snmp.get(pdu, target);
if (response != null) {
    VariableBinding vb = response.getResponse().get(0);
    return vb.getVariable().toString();
}
return null;
}
}
```