

# UPNP# NAT mappings

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## 1. UPNPLib and automatic NAT mappings

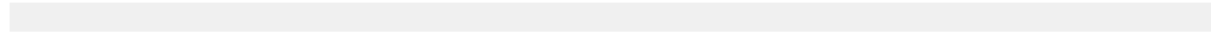
The library provides an implementation of an Internet Gateway Device. With this class you can easily, open/close/check status of NAT ports mappings for all IGD UPNP devices on your network.

## 2. IGD explained

The class to use is *net.sbbi.upnp.impls.InternetGatewayDevice*. Here is a small code snippet (maps port 9090 for TCP on first IGD found and close immediatly the port) to see it in action :

```
int discoveryTimeout = 5000; // 5 secs to receive a response from devices
try {
    InternetGatewayDevice[] IGDs = InternetGatewayDevice.getDevices( discoveryTimeout );
    if ( IGDs != null ) {
        // let's the the first device found
        InternetGatewayDevice testIGD = IGDs[0];
        System.out.println( "Found device " + testIGD.getIGDRootDevice().getModelName() );
        // now let's open the port
        String localhostIP = InetAddress.getLocalHost().getHostAddress();
        // we assume that localhostIP is something else than 127.0.0.1
        boolean mapped = testIGD.addPortMapping( "Some mapping description",
                                                null, 9090, 9090,
                                                localhostIP, 0, "TCP" );

        if ( mapped ) {
            System.out.println( "Port 9090 mapped to " + localhostIP );
            // and now close it
            boolean unmapped = testIGD.deletePortMapping( null, 9090, "TCP" );
            if ( unmapped ) {
                System.out.println( "Port 9090 unmapped" );
            }
        }
    }
} catch ( IOException ex ) {
    // some IO Exception occurred during communication with device
} catch( UPNPResponseException respEx ) {
    // ouns the IGD did not like something !!
}
```



As you can see the code is quite easy to write.