

# Test for group membership with java

How to determine if a userid is a member of a group

Simplest possible example

## Prerequisite

- You must have a keystore with a UWCA certificate for your application. This will be used to authenticate to the groups web service.
- You must have a truststore with the UWCA certificate. The web service uses a UWCA certificate to authenticate to you.

## Program

## MembershipTest.java

```
/* Simple test if an id is a member of a group */

import java.net.URL;
import javax.net.ssl.HttpURLConnection;

public class MembershipTest {

    private static String baseUrl;

    public MembershipTest(String base) {
        baseUrl = base;
    }

    // do the test
    public boolean isMember(String group, String user) {

        String urltext = baseUrl + "/group/" + group + "/member/" + user;
        try {
            URL url = new URL(urltext);
            HttpURLConnection gwsConnection = (HttpURLConnection) url.openConnection();
            int resp = gwsConnection.getResponseCode();
            gwsConnection.disconnect();
            if (resp==200) return true;
            if (resp==404) return false;
            System.err.println("Got an unexpected return: " + resp);
        } catch (Exception e) {
            System.err.println("got error: " + e);
        }
        return (false);
    }

    /* Set keystore and truststore.
    These are often specified on the java command line or in a config file.
    instead of in the code. */

    private static void setKeys() {

        String keyStore = "your_keystore.jks";
        String keyStorePW = "your_keystore_password";
        String trustStore = "your_truststore.jks";
        String trustStorePW = "your_truststore_password";

        // Set the security credential properties
        System.setProperty("javax.net.ssl.keyStore", keyStore);
        System.setProperty("javax.net.ssl.keyStoreType", "JKS");
        System.setProperty("javax.net.ssl.keyStorePassword", keyStorePW);

        System.setProperty("javax.net.ssl.trustStore", trustStore);
        System.setProperty("javax.net.ssl.trustStoreType", "JKS");
        System.setProperty("javax.net.ssl.trustStorePassword", trustStorePW);
    }

    public static void main (String[] args) throws Exception {
        String gwsUrl = "https://iam-ws.u.washington.edu:7443/group_sws/v1";
        setKeys();
        MembershipTest tester = new MembershipTest(gwsUrl);
        boolean result = tester.isMember("group_to_test", "uwnetid_to_test");
        if (result) System.out.println("is a member");
        else System.out.println("not a member");
    }
}
```