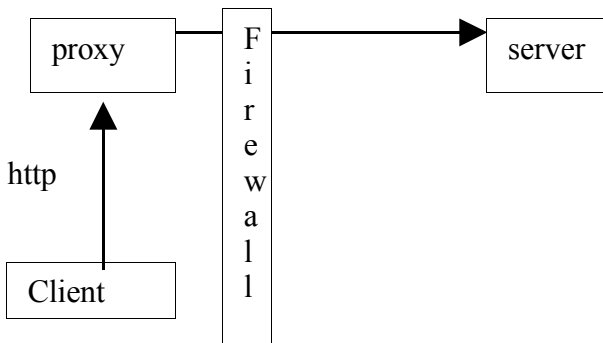


Direct http connection (with proxy and firewall)

Connection to the server by using the protocol by means of a Proxy that allows us to establish a connection with the rmi server. The client must be placed behind a firewall. The firewall will not permit any direct connection with the rmi server.



For this setting, the following test cases are presented:

- Three computers with Linux as their operating system, one of them executing the server + registry (application RemoteCalculatorServer), other the client (RemotecalculatorClient) and other acting as firewall and proxy. A test will be performed with the server being on and it should work without any problems.
- On the other hand, we will try to make a connection with the server, being this off. In this case, the client must fail.
- Finally, we will test if the inoperability with the package provided by SUN does not work.

Execution case 1

Two computers with Linux as their operating system.

JDK 1.5.0 of SUN

Computer N° 1 must execute RemoteCalculatorServer

Computer N° 2 must execute RemoteCalculatorClient

Output Computer N°1(RemoteCalculatorServer)

```
Mar 10, 2006 7:24:42 AM ar.org.fitc.test.rmi.integration.RemoteCalculatorServer main
```

```
INFO: RemoteCalculator Server Ready.
```

```
Mar 10, 2006 7:24:48 AM ar.org.fitc.rmi.transport.RMIServerSocket accept
```

```
INFO: Socket accepted Socket[addr=/10.100.2.241,port=40460,localport=1099]
```

```
Mar 10, 2006 7:24:48 AM ar.org.fitc.rmi.transport.RMIServerSocket accept
```

```
INFO: Socket accepted Socket[addr=/10.100.2.241,port=42218,localport=1099]
```

```
Mar 10, 2006 7:24:48 AM ar.org.fitc.rmi.transport.RMIServerSocket accept
```

```
INFO: Socket accepted Socket[addr=/10.100.2.241,port=49714,localport=1099]
```

```
Mar 10, 2006 7:24:48 AM ar.org.fitc.rmi.transport.RMIServerSocket accept
```

```
INFO: Socket accepted Socket[addr=/10.100.2.241,port=41213,localport=1099]
```

```
Matrix A entered from 10.100.2.241
```

[9, 2]

[6, 4]

Mar 10, 2006 7:24:48 AM ar.org.fitc.rmi.transport.RMIServerSocket accept

INFO: Socket accepted Socket[addr=/10.100.2.241,port=52626,localport=1099]

Matrix B entered from 10.100.2.241

[1, 4]

[1, 5]

Mar 10, 2006 7:24:48 AM ar.org.fitc.rmi.transport.RMIServerSocket accept

INFO: Socket accepted Socket[addr=/10.100.2.241,port=36496,localport=1099]

multiply Matrix called from 10.100.2.241

Result Matrix (multiply)

[11, 46]

[10, 44]

Mar 10, 2006 7:24:49 AM ar.org.fitc.rmi.transport.RMIServerSocket accept

INFO: Socket accepted Socket[addr=/10.100.2.241,port=37319,localport=1099]

multiply Matrix called from 10.100.2.241

Result Matrix (multiply)

[11, 46]

[10, 44]

Mar 10, 2006 7:24:49 AM ar.org.fitc.rmi.transport.RMIServerSocket accept

INFO: Socket accepted Socket[addr=/10.100.2.241,port=48144,localport=1099]

add Matrix called from 10.100.2.241

Result Matrix (add)

[10, 6]

[7, 9]

Mar 10, 2006 7:24:49 AM ar.org.fitc.rmi.transport.RMIServerSocket accept

INFO: Socket accepted Socket[addr=/10.100.2.241,port=38395,localport=1099]

add Matrix called from 10.100.2.241

Result Matrix (add)

[10, 6]

[7, 9]

Mar 10, 2006 7:24:49 AM ar.org.fitc.rmi.transport.RMIServerSocket accept

INFO: Socket accepted Socket[addr=/10.100.2.241,port=57703,localport=1099]

Vector A entered from 10.100.2.241

[50.21, 2000.125, 196.15, 36.95]

Mar 10, 2006 7:24:49 AM ar.org.fitc.rmi.transport.RMIServerSocket accept

INFO: Socket accepted Socket[addr=/10.100.2.241,port=50923,localport=1099]

get Standard Deviation and Average called from 10.100.2.241

Standard Deviation: 955.5700453863042

Average: 570.85875

Mar 10, 2006 7:24:49 AM ar.org.fitc.rmi.transport.RMIServerSocket accept

INFO: Socket accepted Socket[addr=/10.100.2.241,port=52276,localport=1099]

get Standard Deviation and Average called from 10.100.2.241

Standard Deviation: 955.5700453863042

Average: 570.85875

Output Computer N° 2(RemoteCalculatorClient)

Mar 10, 2006 6:59:48 AM ar.org.fitc.test.rmi.integration.RemoteCalculatorClient main

INFO: RemoteCalculatorClient locating RMI registry on remote host "10.100.2.246".

Mar 10, 2006 6:59:48 AM ar.org.fitc.test.rmi.integration.RemoteCalculatorClient main

INFO: RemoteCalculatorClient looking up service "RemoteCalculator".

Mar 10, 2006 6:59:49 AM ar.org.fitc.rmi.transport.ClientProtocolHandler writeHandshake

INFO: Writing handshake

Mar 10, 2006 6:59:49 AM ar.org.fitc.rmi.transport.ClientProtocolHandler writeHandshake

INFO: Writing handshake

Mar 10, 2006 6:59:49 AM ar.org.fitc.rmi.transport.ClientProtocolHandler writeHandshake

INFO: Writing handshake

Mar 10, 2006 6:59:49 AM ar.org.fitc.rmi.transport.ClientProtocolHandler writeHandshake

INFO: Writing handshake

Mar 10, 2006 6:59:49 AM ar.org.fitc.rmi.transport.ClientProtocolHandler writeHandshake

INFO: Writing handshake

Mar 10, 2006 6:59:49 AM ar.org.fitc.rmi.transport.ClientProtocolHandler writeHandshake

INFO: Writing handshake

Mar 10, 2006 6:59:49 AM ar.org.fitc.rmi.transport.ClientProtocolHandler writeHandshake

INFO: Writing handshake

Mar 10, 2006 6:59:49 AM ar.org.fitc.rmi.transport.ClientProtocolHandler writeHandshake

INFO: Writing handshake

Mar 10, 2006 6:59:49 AM ar.org.fitc.rmi.transport.ClientProtocolHandler writeHandshake

INFO: Writing handshake

Mar 10, 2006 6:59:49 AM ar.org.fitc.rmi.transport.ClientProtocolHandler writeHandshake
INFO: Writing handshake
Mar 10, 2006 6:59:49 AM ar.org.fitc.rmi.transport.ClientProtocolHandler writeHandshake
INFO: Writing handshake
Mar 10, 2006 6:59:49 AM ar.org.fitc.rmi.transport.ClientProtocolHandler writeHandshake
INFO: Writing handshake

Matrix A

[9, 2]

[6, 4]

Matrix B

[1, 4]

[1, 5]

Result Matrix (multiply)

[11, 46]

[10, 44]

Result Matrix (add)

[10, 6]

[7, 9]

Vector

[50.21, 2000.125, 196.15, 36.95]

Standard Deviation: 955.5700453863042

Average: 570.85875

Output Computer N° 1 (RemoteCalculatorServerBI)

Mar 10, 2006 7:44:45 AM ar.org.fitc.test.rmi.integration.RemoteCalculatorServerBI main

INFO: RemoteCalculator Server Ready.

Mar 10, 2006 7:44:54 AM ar.org.fitc.rmi.transport.RMIServerSocket accept

INFO: Socket accepted Socket[addr=/10.100.2.241,port=37187,localport=1099]

Mar 10, 2006 7:44:54 AM ar.org.fitc.rmi.transport.RMIServerSocket accept

INFO: Socket accepted Socket[addr=/10.100.2.241,port=39415,localport=1099]

Mar 10, 2006 7:44:54 AM ar.org.fitc.rmi.transport.RMIServerSocket accept

INFO: Socket accepted Socket[addr=/10.100.2.241,port=33456,localport=1099]

Mar 10, 2006 7:44:54 AM ar.org.fitc.rmi.transport.RMIServerSocket accept

INFO: Socket accepted Socket[addr=/10.100.2.241,port=56086,localport=1099]

Matrix A entered from 10.100.2.241

[9, 2]

[6, 4]

Matrix B entered from 10.100.2.241

[1, 4]

[1, 5]

Mar 10, 2006 7:44:54 AM ar.org.fitc.rmi.transport.RMIServerSocket accept

INFO: Socket accepted Socket[addr=/10.100.2.241,port=33441,localport=1099]

Mar 10, 2006 7:44:54 AM ar.org.fitc.rmi.transport.RMIServerSocket accept

INFO: Socket accepted Socket[addr=/10.100.2.241,port=34362,localport=1099]

multiply Matrix called from 10.100.2.241

Result Matrix (multiply)

[11, 46]

[10, 44]

Mar 10, 2006 7:44:54 AM ar.org.fitc.rmi.transport.RMIServerSocket accept

INFO: Socket accepted Socket[addr=/10.100.2.241,port=54437,localport=1099]

multiply Matrix called from 10.100.2.241

Result Matrix (multiply)

[11, 46]

[10, 44]

Mar 10, 2006 7:44:54 AM ar.org.fitc.rmi.transport.RMIServerSocket accept

INFO: Socket accepted Socket[addr=/10.100.2.241,port=49649,localport=1099]

add Matrix called from 10.100.2.241

Result Matrix (add)

[10, 6]

[7, 9]

Mar 10, 2006 7:44:54 AM ar.org.fitc.rmi.transport.RMIServerSocket accept

INFO: Socket accepted Socket[addr=/10.100.2.241,port=40462,localport=1099]

add Matrix called from 10.100.2.241

Result Matrix (add)

[10, 6]

[7, 9]

Mar 10, 2006 7:44:54 AM ar.org.fitc.rmi.transport.RMIServerSocket accept

INFO: Socket accepted Socket[addr=/10.100.2.241,port=60529,localport=1099]

Vector A entered from 10.100.2.241

[50.21, 2000.125, 196.15, 36.95]

Mar 10, 2006 7:44:54 AM ar.org.fitc.rmi.transport.RMIServerSocket accept

INFO: Socket accepted Socket[addr=/10.100.2.241,port=34681,localport=1099]

get Standard Deviation and Average called from 10.100.2.241

Standard Deviation: 955.5700453863042

Average: 570.85875

Mar 10, 2006 7:44:54 AM ar.org.fitc.rmi.transport.RMIServerSocket accept

INFO: Socket accepted Socket[addr=/10.100.2.241,port=50848,localport=1099]

get Standard Deviation and Average called from 10.100.2.241

Standard Deviation: 955.5700453863042

Average: 570.85875

Output Computer N° 2 (RemoteCalculatorClientBI)

Mar 10, 2006 7:19:54 AM ar.org.fitc.test.rmi.integration.RemoteCalculatorClientBI main

INFO: RemoteCalculatorClient locating RMI registry on remote host "10.100.2.246".

Mar 10, 2006 7:19:54 AM ar.org.fitc.test.rmi.integration.RemoteCalculatorClientBI main

INFO: RemoteCalculatorClient looking up service "RemoteCalculator".

Mar 10, 2006 7:19:54 AM ar.org.fitc.rmi.transport.ClientProtocolHandler writeHandshake

INFO: Writing handshake

Mar 10, 2006 7:19:55 AM ar.org.fitc.rmi.transport.ClientProtocolHandler writeHandshake

INFO: Writing handshake

Mar 10, 2006 7:19:55 AM ar.org.fitc.rmi.transport.ClientProtocolHandler writeHandshake

INFO: Writing handshake

Mar 10, 2006 7:19:55 AM ar.org.fitc.rmi.transport.ClientProtocolHandler writeHandshake

INFO: Writing handshake

Mar 10, 2006 7:19:55 AM ar.org.fitc.rmi.transport.ClientProtocolHandler writeHandshake

INFO: Writing handshake

Mar 10, 2006 7:19:55 AM ar.org.fitc.rmi.transport.ClientProtocolHandler writeHandshake

INFO: Writing handshake

Mar 10, 2006 7:19:55 AM ar.org.fitc.rmi.transport.ClientProtocolHandler writeHandshake

INFO: Writing handshake

Matrix A

[9, 2]

[6, 4]

Matrix B

[1, 4]

[1, 5]

Result Matrix (multiply)

[11, 46]

[10, 44]

Result Matrix (add)

Mar 10, 2006 7:19:55 AM ar.org.fitc.rmi.transport.ClientProtocolHandler writeHandshake

INFO: Writing handshake

Mar 10, 2006 7:19:55 AM ar.org.fitc.rmi.transport.ClientProtocolHandler writeHandshake

INFO: Writing handshake

[10, 6]

Mar 10, 2006 7:19:55 AM ar.org.fitc.rmi.transport.ClientProtocolHandler writeHandshake

INFO: Writing handshake

[7, 9]

Vector

Mar 10, 2006 7:19:55 AM ar.org.fitc.rmi.transport.ClientProtocolHandler writeHandshake

INFO: Writing handshake

[50.21, 2000.125, 196.15, 36.95]

Standard Deviation: 955.5700453863042

Mar 10, 2006 7:19:55 AM ar.org.fitc.rmi.transport.ClientProtocolHandler writeHandshake

INFO: Writing handshake

Average: 570.85875

Output Computer N° 1 (RemoteHashServer)

Mar 10, 2006 7:59:35 AM ar.org.fitc.test.rmi.integration.RemoteHashServer main

INFO: RemoteMapServer creating a local RMI registry on the default port.

Mar 10, 2006 7:59:35 AM ar.org.fitc.test.rmi.integration.RemoteHashServer main

INFO: RemoteMapServer creating local object and remote adapter.

Mar 10, 2006 7:59:36 AM ar.org.fitc.test.rmi.integration.RemoteHashServer main

INFO: RemoteMapServer publishing service "RemoteHashMap" in local registry.

Mar 10, 2006 7:59:36 AM ar.org.fitc.test.rmi.integration.RemoteHashServer main

INFO: Published RemoteMap as service "RemoteHashMap". Ready.

Mar 10, 2006 7:59:41 AM ar.org.fitc.rmi.transport.RMIServerSocket accept

INFO: Socket accepted Socket[addr=/10.100.2.241,port=34297,localport=1099]

Mar 10, 2006 7:59:41 AM ar.org.fitc.rmi.transport.RMIServerSocket accept

INFO: Socket accepted Socket[addr=/10.100.2.241,port=37237,localport=1099]

Mar 10, 2006 7:59:41 AM ar.org.fitc.rmi.transport.RMIServerSocket accept

INFO: Socket accepted Socket[addr=/10.100.2.241,port=33131,localport=1099]

Mar 10, 2006 7:59:41 AM ar.org.fitc.rmi.transport.RMIServerSocket accept

INFO: Socket accepted Socket[addr=/10.100.2.241,port=57196,localport=1099]

Internal HashMap Status... Timestamp: 1141988381484

get() called 0 time(s)..

put() called 1 time(s)

Mar 10, 2006 7:59:41 AM ar.org.fitc.rmi.transport.RMIServerSocket accept

INFO: Socket accepted Socket[addr=/10.100.2.241,port=49984,localport=1099]

Internal HashMap Status... Timestamp: 1141988381510

get() called 0 time(s)..

put() called 2 time(s)

Internal HashMap Status... Timestamp: 1141988381525

get() called 0 time(s)..

put() called 3 time(s)

Internal HashMap Status... Timestamp: 1141988381544

get() called 0 time(s)..

put() called 4 time(s)

Mar 10, 2006 7:59:41 AM ar.org.fitc.rmi.transport.RMIServerSocket accept

INFO: Socket accepted Socket[addr=/10.100.2.241,port=44796,localport=1099]

Mar 10, 2006 7:59:41 AM ar.org.fitc.rmi.transport.RMIServerSocket accept

INFO: Socket accepted Socket[addr=/10.100.2.241,port=55832,localport=1099]

Mar 10, 2006 7:59:41 AM ar.org.fitc.rmi.transport.RMIServerSocket accept

INFO: Socket accepted Socket[addr=/10.100.2.241,port=33733,localport=1099]

Internal HashMap Status... Timestamp: 1141988381596

get() called 0 time(s)..

put() called 5 time(s)

Mar 10, 2006 7:59:41 AM ar.org.fitc.rmi.transport.RMIServerSocket accept

INFO: Socket accepted Socket[addr=/10.100.2.241,port=46527,localport=1099]

Internal HashMap Status... Timestamp: 1141988381613

get() called 0 time(s)..

put() called 6 time(s)

Mar 10, 2006 7:59:41 AM ar.org.fitc.rmi.transport.RMIServerSocket accept

INFO: Socket accepted Socket[addr=/10.100.2.241,port=38362,localport=1099]

Internal HashMap Status... Timestamp: 1141988381626

get() called 0 time(s)..

put() called 7 time(s)

Mar 10, 2006 7:59:41 AM ar.org.fitc.rmi.transport.RMIServerSocket accept

INFO: Socket accepted Socket[addr=/10.100.2.241,port=46712,localport=1099]

Mar 10, 2006 7:59:41 AM ar.org.fitc.rmi.transport.RMIServerSocket accept

INFO: Socket accepted Socket[addr=/10.100.2.241,port=37345,localport=1099]

Internal HashMap Status... Timestamp: 1141988381676

get() called 1 time(s)..

put() called 7 time(s)

Mar 10, 2006 7:59:41 AM ar.org.fitc.rmi.transport.RMIServerSocket accept

INFO: Socket accepted Socket[addr=/10.100.2.241,port=51044,localport=1099]

Internal HashMap Status... Timestamp: 1141988381726

get() called 2 time(s)..

put() called 7 time(s)

Mar 10, 2006 7:59:41 AM ar.org.fitc.rmi.transport.RMIServerSocket accept

INFO: Socket accepted Socket[addr=/10.100.2.241,port=48112,localport=1099]

Internal HashMap Status... Timestamp: 1141988381777

get() called 3 time(s)..

put() called 7 time(s)

Mar 10, 2006 7:59:41 AM ar.org.fitc.rmi.transport.RMIServerSocket accept

INFO: Socket accepted Socket[addr=/10.100.2.241,port=46771,localport=1099]

Internal HashMap Status... Timestamp: 1141988381803

get() called 4 time(s)..

put() called 7 time(s)

Mar 10, 2006 7:59:41 AM ar.org.fitc.rmi.transport.RMIServerSocket accept

INFO: Socket accepted Socket[addr=/10.100.2.241,port=38007,localport=1099]

Internal HashMap Status... Timestamp: 1141988381827

get() called 5 time(s)..

put() called 7 time(s)

Mar 10, 2006 7:59:41 AM ar.org.fitc.rmi.transport.RMIServerSocket accept

INFO: Socket accepted Socket[addr=/10.100.2.241,port=47266,localport=1099]

Internal HashMap Status... Timestamp: 1141988381840

get() called 6 time(s)..

put() called 7 time(s)

Mar 10, 2006 7:59:41 AM ar.org.fitc.rmi.transport.RMIServerSocket accept

INFO: Socket accepted Socket[addr=/10.100.2.241,port=38734,localport=1099]

Internal HashMap Status... Timestamp: 1141988381862

get() called 7 time(s)..

put() called 7 time(s)

Output Computer N° 2 (RemoteHashClient)

RemoteMapClient locating RMI registry on remote host "10.100.2.246".

Mar 10, 2006 7:34:41 AM ar.org.fitc.test.rmi.integration.RemoteHashClient main

INFO: RemoteMapClient looking up service "RemoteHashMap".

Mar 10, 2006 7:34:41 AM ar.org.fitc.rmi.transport.ClientProtocolHandler writeHandshake

INFO: Writing handshake

Mar 10, 2006 7:34:41 AM ar.org.fitc.rmi.transport.ClientProtocolHandler writeHandshake

INFO: Writing handshake

Mar 10, 2006 7:34:42 AM ar.org.fitc.rmi.transport.ClientProtocolHandler writeHandshake

INFO: Writing handshake

Mar 10, 2006 7:34:42 AM ar.org.fitc.test.rmi.integration.RemoteHashClient putCall

INFO: RemoteMapClient inserting on 10.100.2.246 key=one, value=pride

Mar 10, 2006 7:34:42 AM ar.org.fitc.rmi.transport.ClientProtocolHandler writeHandshake

INFO: Writing handshake

pride

envy

Mar 10, 2006 7:34:42 AM ar.org.fitc.test.rmi.integration.RemoteHashClient putCall

INFO: RemoteMapClient inserting on 10.100.2.246 key=two, value=envy

Mar 10, 2006 7:34:42 AM ar.org.fitc.rmi.transport.ClientProtocolHandler writeHandshake

INFO: Writing handshake

gluttony

Mar 10, 2006 7:34:42 AM ar.org.fitc.test.rmi.integration.RemoteHashClient putCall

INFO: RemoteMapClient inserting on 10.100.2.246 key=three, value=gluttony

Mar 10, 2006 7:34:42 AM ar.org.fitc.rmi.transport.ClientProtocolHandler writeHandshake

INFO: Writing handshake

lust

Mar 10, 2006 7:34:42 AM ar.org.fitc.test.rmi.integration.RemoteHashClient putCall

INFO: RemoteMapClient inserting on 10.100.2.246 key=four, value=lust

Mar 10, 2006 7:34:42 AM ar.org.fitc.rmi.transport.ClientProtocolHandler writeHandshake

INFO: Writing handshake

anger

Mar 10, 2006 7:34:42 AM ar.org.fitc.test.rmi.integration.RemoteHashClient putCall

INFO: RemoteMapClient inserting on 10.100.2.246 key=five, value=anger

Mar 10, 2006 7:34:42 AM ar.org.fitc.rmi.transport.ClientProtocolHandler writeHandshake

INFO: Writing handshake

greed

Mar 10, 2006 7:34:42 AM ar.org.fitc.test.rmi.integration.RemoteHashClient putCall

INFO: RemoteMapClient inserting on 10.100.2.246 key=six, value=greed

Mar 10, 2006 7:34:42 AM ar.org.fitc.rmi.transport.ClientProtocolHandler writeHandshake

INFO: Writing handshake

sloth

Mar 10, 2006 7:34:42 AM ar.org.fitc.test.rmi.integration.RemoteHashClient putCall

INFO: RemoteMapClient inserting on 10.100.2.246 key=seven, value=sloth

Mar 10, 2006 7:34:42 AM ar.org.fitc.rmi.transport.ClientProtocolHandler writeHandshake

INFO: Writing handshake

RemoteMapClient HashMap successfully populated...

Mar 10, 2006 7:34:42 AM ar.org.fitc.rmi.transport.ClientProtocolHandler writeHandshake

INFO: Writing handshake

Mar 10, 2006 7:34:42 AM ar.org.fitc.test.rmi.integration.RemoteHashClient sizeCall

INFO: RemoteMapClient HashMap size: 7

Mar 10, 2006 7:34:42 AM ar.org.fitc.test.rmi.integration.RemoteHashClient main

INFO: RemoteMapClient HashMap size correct...

Mar 10, 2006 7:34:42 AM ar.org.fitc.rmi.transport.ClientProtocolHandler writeHandshake
INFO: Writing handshake
Mar 10, 2006 7:34:42 AM ar.org.fitc.test.rmi.integration.RemoteHashClient getCall
INFO: RemoteMapClient found at 10.100.2.246, value=pride
Mar 10, 2006 7:34:42 AM ar.org.fitc.rmi.transport.ClientProtocolHandler writeHandshake
INFO: Writing handshake
Mar 10, 2006 7:34:42 AM ar.org.fitc.test.rmi.integration.RemoteHashClient getCall
INFO: RemoteMapClient found at 10.100.2.246, value=envy
Mar 10, 2006 7:34:42 AM ar.org.fitc.rmi.transport.ClientProtocolHandler writeHandshake
INFO: Writing handshake
Mar 10, 2006 7:34:42 AM ar.org.fitc.test.rmi.integration.RemoteHashClient getCall
INFO: RemoteMapClient found at 10.100.2.246, value=gluttony
Mar 10, 2006 7:34:42 AM ar.org.fitc.rmi.transport.ClientProtocolHandler writeHandshake
INFO: Writing handshake
Mar 10, 2006 7:34:42 AM ar.org.fitc.test.rmi.integration.RemoteHashClient getCall
INFO: RemoteMapClient found at 10.100.2.246, value=lust
Mar 10, 2006 7:34:42 AM ar.org.fitc.rmi.transport.ClientProtocolHandler writeHandshake
INFO: Writing handshake
Mar 10, 2006 7:34:42 AM ar.org.fitc.test.rmi.integration.RemoteHashClient getCall
INFO: RemoteMapClient found at 10.100.2.246, value=anger
Mar 10, 2006 7:34:42 AM ar.org.fitc.rmi.transport.ClientProtocolHandler writeHandshake
INFO: Writing handshake
Mar 10, 2006 7:34:42 AM ar.org.fitc.test.rmi.integration.RemoteHashClient getCall
INFO: RemoteMapClient found at 10.100.2.246, value=greed
Mar 10, 2006 7:34:42 AM ar.org.fitc.rmi.transport.ClientProtocolHandler writeHandshake
INFO: Writing handshake
Mar 10, 2006 7:34:42 AM ar.org.fitc.test.rmi.integration.RemoteHashClient getCall
INFO: RemoteMapClient found at 10.100.2.246, value=sloth
Mar 10, 2006 7:34:42 AM ar.org.fitc.test.rmi.integration.RemoteHashClient main
INFO: RemoteMapClient HashMap check passed...

Execution case 2

Requirements

A computer with Linux as its operating system

The computer must execute RemoteCalculatorClient with the JDK 1.5.0 of ITC

Output Computer N° 1 (RemoteCalculatorClient)

Mar 10, 2006 8:27:07 AM ar.org.fitc.test.rmi.integration.RemoteCalculatorClient main
INFO: RemoteCalculatorClient locating RMI registry on remote host "10.100.2.246".
Mar 10, 2006 8:27:07 AM ar.org.fitc.test.rmi.integration.RemoteCalculatorClient main
INFO: RemoteCalculatorClient looking up service "RemoteCalculator".
Mar 10, 2006 8:27:07 AM ar.org.fitc.rmi.transport.ClientProtocolHandler writeHandshake
INFO: Writing handshake
java.lang.NullPointerException
at ar.org.fitc.test.rmi.integration.RemoteCalculatorClient.main(RemoteCalculatorClient.java:47)
Mar 10, 2006 8:27:07 AM ar.org.fitc.test.rmi.integration.RemoteCalculatorClient main
INFO: RemoteCalculatorClient problem with RemoteCalculator, exception:
java.lang.NullPointerException

Output Computer N° 1 (RemoteHashClient)

RemoteMapClient locating RMI registry on remote host "10.100.2.246".
Mar 10, 2006 8:28:04 AM ar.org.fitc.test.rmi.integration.RemoteHashClient main
INFO: RemoteMapClient looking up service "RemoteHashMap".
Mar 10, 2006 8:28:04 AM ar.org.fitc.rmi.transport.ClientProtocolHandler writeHandshake

```
INFO: Writing handshake
Mar 10, 2006 8:28:04 AM ar.org.fitc.test.rmi.integration.RemoteHashClient putCall
INFO: RemoteMapClient inserting on 10.100.2.246 key=one, value=pride
pride
Exception in thread "main" java.lang.NullPointerException
    at ar.org.fitc.test.rmi.integration.RemoteHashClient.putCall(RemoteHashClient.java:110)
    at ar.org.fitc.test.rmi.integration.RemoteHashClient.populateHashMap
(RemoteHashClient.java:100)
    at ar.org.fitc.test.rmi.integration.RemoteHashClient.main(RemoteHashClient.java:80)
```

Execution case 3

Requirements

Two computers with Linux as their operating system.

Computer N° 1 must execute RemoteCalculatorServer with Sun's JDK 1.5.0

Computer N° 2 must execute RemoteCalculatorClient with Sun's JDK 1.5.0 y and ITC's RMI package.

Output Computer N° 1 (RemoteCalculatorServer)

```
Mar 10, 2006 8:59:20 AM ar.org.fitc.test.rmi.integration.RemoteCalculatorServer main
INFO: RemoteCalculator Server Ready.
Mar 10, 2006 8:59:56 AM ar.org.fitc.rmi.transport.RMIServerSocket accept
INFO: Socket accepted Socket[addr=/10.100.2.241,port=45443,localport=1099]
```

Output Computer N° 2 (RemoteCalculatorClient)

```
Mar 10, 2006 8:34:41 AM ar.org.fitc.test.rmi.integration.RemoteCalculatorClient main
INFO: RemoteCalculatorClient locating RMI registry on remote host "10.100.2.246".
Mar 10, 2006 8:34:42 AM sun.rmi.transport.tcp.TCPEndpoint <clinit>
FINE: main: localhostKnown = false, localhost = null
Mar 10, 2006 8:34:42 AM ar.org.fitc.test.rmi.integration.RemoteCalculatorClient main
INFO: RemoteCalculatorClient looking up service "RemoteCalculator".
Mar 10, 2006 8:34:42 AM sun.rmi.transport.tcp.TCPTransport <init>
FINE: main: Version = 2, ep = [:0]
Mar 10, 2006 8:34:42 AM sun.rmi.transport.tcp.TCPEndpoint getLocalEndpoint
FINE: main: created local endpoint for socket factory null on port 0
Mar 10, 2006 8:34:42 AM sun.rmi.transport.tcp.TCPChannel createConnection
FINE: main: create connection
Mar 10, 2006 8:34:42 AM sun.rmi.transport.tcp.TCPEndpoint newSocket
FINER: main: opening socket to [10.100.2.246:1099]
Mar 10, 2006 8:34:42 AM sun.rmi.transport.proxy.RMIMasterSocketFactory createSocket
FINE: main: host: 10.100.2.246, port: 1099
Mar 10, 2006 8:34:57 AM sun.rmi.transport.proxy.RMIMasterSocketFactory createSocket
FINE: main: direct socket connection failed:
java.net.NoRouteToHostException: connect timed out: 10.100.2.246
    at sun.rmi.transport.proxy.RMIMasterSocketFactory.createSocket
(RMIMasterSocketFactory.java:187)
    at sun.rmi.transport.tcp.TCPEndpoint.newSocket(TCPEndpoint.java:569)
    at sun.rmi.transport.tcp.TCPChannel.createConnection(TCPChannel.java:185)
    at sun.rmi.transport.tcp.TCPChannel.newConnection(TCPChannel.java:171)
```

```
at sun.rmi.server.UnicastRef.newCall(UnicastRef.java:306)
at sun.rmi.registry.RegistryImpl_Stub.lookup(Unknown Source)
at ar.org.fitc.test.rmi.integration.RemoteCalculatorClient.main(RemoteCalculatorClient.java:40)
Mar 10, 2006 8:34:57 AM sun.rmi.transport.proxy.RMIMasterSocketFactory createSocket
FINE: main: trying with factory: sun.rmi.transport.proxy.RMIHttpToPortSocketFactory@1d2068d
Mar 10, 2006 8:34:57 AM sun.rmi.transport.proxy.HttpSendSocket <init>
FINER: main: host = 10.100.2.246, port = 1099, url = http://10.100.2.246:1099/
Mar 10, 2006 8:34:57 AM sun.rmi.transport.proxy.HttpSendSocket readNotify
FINER: main: sending request and activating input stream
Mar 10, 2006 8:38:21 AM sun.rmi.transport.proxy.HttpSendSocket readNotify
FINE: main: failed to get input stream, exception:
java.io.IOException: Server returned HTTP response code: 503 for URL: http://10.100.2.246:1099/
at sun.net.www.protocol.http.HttpURLConnection.getInputStream(HttpURLConnection.java:1149)
at sun.rmi.transport.proxy.HttpSendSocket.readNotify(HttpSendSocket.java:154)
at sun.rmi.transport.proxy.HttpSendInputStream.read(HttpSendInputStream.java:51)
at sun.rmi.transport.proxy.RMIMasterSocketFactory.createSocket
(RMIMasterSocketFactory.java:228)
at sun.rmi.transport.tcp.TCPEndpoint.newSocket(TCPEndpoint.java:569)
at sun.rmi.transport.tcp.TCPChannel.createConnection(TCPChannel.java:185)
at sun.rmi.transport.tcp.TCPChannel.newConnection(TCPChannel.java:171)
at sun.rmi.server.UnicastRef.newCall(UnicastRef.java:306)
at sun.rmi.registry.RegistryImpl_Stub.lookup(Unknown Source)
at ar.org.fitc.test.rmi.integration.RemoteCalculatorClient.main(RemoteCalculatorClient.java:40)
Mar 10, 2006 8:38:21 AM sun.rmi.transport.proxy.RMIMasterSocketFactory createSocket
FINE: main: factory failed:
java.io.IOException: HTTP request failed
at sun.rmi.transport.proxy.HttpSendSocket.readNotify(HttpSendSocket.java:159)
at sun.rmi.transport.proxy.HttpSendInputStream.read(HttpSendInputStream.java:51)
at sun.rmi.transport.proxy.RMIMasterSocketFactory.createSocket
(RMIMasterSocketFactory.java:228)
at sun.rmi.transport.tcp.TCPEndpoint.newSocket(TCPEndpoint.java:569)
at sun.rmi.transport.tcp.TCPChannel.createConnection(TCPChannel.java:185)
at sun.rmi.transport.tcp.TCPChannel.newConnection(TCPChannel.java:171)
at sun.rmi.server.UnicastRef.newCall(UnicastRef.java:306)
at sun.rmi.registry.RegistryImpl_Stub.lookup(Unknown Source)
at ar.org.fitc.test.rmi.integration.RemoteCalculatorClient.main(RemoteCalculatorClient.java:40)
Mar 10, 2006 8:38:21 AM sun.rmi.transport.proxy.RMIMasterSocketFactory createSocket
FINE: main: trying with factory: sun.rmi.transport.proxy.RMIHttpToCGISocketFactory@1193779
Mar 10, 2006 8:38:21 AM sun.rmi.transport.proxy.HttpSendSocket <init>
FINER: main: host = 10.100.2.246, port = 1099, url = http://10.100.2.246/cgi-bin/java-
rmi.cgi?forward=1099
Mar 10, 2006 8:38:21 AM sun.rmi.transport.proxy.HttpSendSocket readNotify
FINER: main: sending request and activating input stream
Mar 10, 2006 8:38:21 AM sun.rmi.transport.proxy.HttpSendSocket readNotify
FINE: main: failed to get input stream, exception:
java.io.IOException: Server returned HTTP response code: 503 for URL: http://10.100.2.246/cgi-
bin/java-rmi.cgi?forward=1099
at sun.net.www.protocol.http.HttpURLConnection.getInputStream(HttpURLConnection.java:1149)
at sun.rmi.transport.proxy.HttpSendSocket.readNotify(HttpSendSocket.java:154)
at sun.rmi.transport.proxy.HttpSendInputStream.read(HttpSendInputStream.java:51)
at sun.rmi.transport.proxy.RMIMasterSocketFactory.createSocket
(RMIMasterSocketFactory.java:228)
at sun.rmi.transport.tcp.TCPEndpoint.newSocket(TCPEndpoint.java:569)
at sun.rmi.transport.tcp.TCPChannel.createConnection(TCPChannel.java:185)
```

```

at sun.rmi.transport.tcp.TCPChannel.newConnection(TCPChannel.java:171)
at sun.rmi.server.UnicastRef.newCall(UnicastRef.java:306)
at sun.rmi.registry.RegistryImpl_Stub.lookup(Unknown Source)
at ar.org.fitc.test.rmi.integration.RemoteCalculatorClient.main(RemoteCalculatorClient.java:40)
Mar 10, 2006 8:38:21 AM sun.rmi.transport.proxy.RMIMasterSocketFactory createSocket
FINE: main: factory failed:
IOException: HTTP request failed
HttpSendSocket.readNotify(HttpSendSocket.java:159)
HttpSendInputStream.read(HttpSendInputStream.java:51)
RMIMasterSocketFactory.createSocket(RMIMasterSocketFactory.java:228)
TCPEndpoint.newSocket(TCPEndpoint.java:569)
  at sun.rmi.transport.tcp.TCPChannel.createConnection(TCPChannel.java:185)
TCPChannel.newConnection(TCPChannel.java:171)
UnicastRef.newCall(UnicastRef.java:306)
RegistryImpl_Stub.lookup(Unknown Source)
RemoteCalculatorClient.main(RemoteCalculatorClient.java:40)
java.rmi.ConnectException: Connection refused to host: 10.100.2.246; nested exception is:
java.net.ConnectException: Connection timed out
at sun.rmi.transport.tcp.TCPEndpoint.newSocket(TCPEndpoint.java:574)
at sun.rmi.transport.tcp.TCPChannel.createConnection(TCPChannel.java:185)
at sun.rmi.transport.tcp.TCPChannel.newConnection(TCPChannel.java:171)
at sun.rmi.server.UnicastRef.newCall(UnicastRef.java:306)
at sun.rmi.registry.RegistryImpl_Stub.lookup(Unknown Source)
at ar.org.fitc.test.rmi.integration.RemoteCalculatorClient.main(RemoteCalculatorClient.java:40)
Caused by: java.net.ConnectException: Connection timed out
at sun.rmi.transport.proxy.RMIMasterSocketFactory.checkConnector
(RMIMasterSocketFactory.java:309)
at sun.rmi.transport.proxy.RMIMasterSocketFactory.createSocket
(RMIMasterSocketFactory.java:253)
at sun.rmi.transport.tcp.TCPEndpoint.newSocket(TCPEndpoint.java:569)
... 5 more
Mar 10, 2006 8:38:21 AM ar.org.fitc.test.rmi.integration.RemoteCalculatorClient main
INFO: RemoteCalculatorClient problem with RemoteCalculator, exception:
java.rmi.ConnectException: Connection refused to host: 10.100.2.246; nested exception is:
java.net.ConnectException: Connection timed out

```

Output Computer N° 1 (RemoteHashServer)

```

Mar 10, 2006 9:14:53 AM ar.org.fitc.test.rmi.integration.RemoteHashServer main
INFO: RemoteMapServer creating a local RMI registry on the default port.
Mar 10, 2006 9:14:53 AM ar.org.fitc.test.rmi.integration.RemoteHashServer main
INFO: RemoteMapServer creating local object and remote adapter.
Mar 10, 2006 9:14:53 AM ar.org.fitc.test.rmi.integration.RemoteHashServer main
INFO: RemoteMapServer publishing service "RemoteHashMap" in local registry.
Mar 10, 2006 9:14:53 AM ar.org.fitc.test.rmi.integration.RemoteHashServer main
INFO: Published RemoteMap as service "RemoteHashMap". Ready.
Mar 10, 2006 9:15:27 AM ar.org.fitc.rmi.transport.RMIServerSocket accept
INFO: Socket accepted Socket[addr=/10.100.2.241,port=56445,localport=1099]

```

Output Computer N° 2 (RemoteHashClient)

```

RemoteMapClient locating RMI registry on remote host "10.100.2.246".
Mar 10, 2006 8:50:12 AM sun.rmi.transport.tcp.TCPEndpoint <clinit>
FINE: main: localhostKnown = false, localhost = null

```

Mar 10, 2006 8:50:12 AM ar.org.fitc.test.rmi.integration.RemoteHashClient main
INFO: RemoteMapClient looking up service "RemoteHashMap".
Mar 10, 2006 8:50:12 AM sun.rmi.transport.tcp.TCPTransport <init>
FINE: main: Version = 2, ep = [:0]
Mar 10, 2006 8:50:12 AM sun.rmi.transport.tcp.TCPEndpoint getLocalEndpoint
FINE: main: created local endpoint for socket factory null on port 0
Mar 10, 2006 8:50:12 AM sun.rmi.transport.tcp.TCPChannel createConnection
FINE: main: create connection
Mar 10, 2006 8:50:12 AM sun.rmi.transport.tcp.TCPEndpoint newSocket
FINER: main: opening socket to [10.100.2.246:1099]
Mar 10, 2006 8:50:12 AM sun.rmi.transport.proxy.RMIMasterSocketFactory createSocket
FINE: main: host: 10.100.2.246, port: 1099
Mar 10, 2006 8:50:27 AM sun.rmi.transport.proxy.RMIMasterSocketFactory createSocket
FINE: main: direct socket connection failed:
java.net.NoRouteToHostException: connect timed out: 10.100.2.246
 at sun.rmi.transport.proxy.RMIMasterSocketFactory.createSocket
 (RMIMasterSocketFactory.java:187)
 at sun.rmi.transport.tcp.TCPEndpoint.newSocket(TCPEndpoint.java:569)
 at sun.rmi.transport.tcp.TCPChannel.createConnection(TCPChannel.java:185)
 at sun.rmi.transport.tcp.TCPChannel.newConnection(TCPChannel.java:171)
 at sun.rmi.server.UnicastRef.newCall(UnicastRef.java:306)
 at sun.rmi.registry.RegistryImpl_Stub.lookup(Unknown Source)
 at ar.org.fitc.test.rmi.integration.RemoteHashClient.main(RemoteHashClient.java:73)
Mar 10, 2006 8:50:27 AM sun.rmi.transport.proxy.RMIMasterSocketFactory createSocket
FINE: main: trying with factory: sun.rmi.transport.proxy.RMIHttpToPortSocketFactory@1ac2f9c
Mar 10, 2006 8:50:27 AM sun.rmi.transport.proxy.HttpSendSocket <init>
FINER: main: host = 10.100.2.246, port = 1099, url = http://10.100.2.246:1099/
Mar 10, 2006 8:50:28 AM sun.rmi.transport.proxy.HttpSendSocket readNotify
FINER: main: sending request and activating input stream
Mar 10, 2006 8:50:53 AM sun.rmi.transport.proxy.HttpSendSocket readNotify
FINE: main: failed to get input stream, exception:
java.io.IOException: Server returned HTTP response code: 503 for URL: http://10.100.2.246:1099/
 at sun.net.www.protocol.http.HttpURLConnection.getInputStream(HttpURLConnection.java:1149)
 at sun.rmi.transport.proxy.HttpSendSocket.readNotify(HttpSendSocket.java:154)
 at sun.rmi.transport.proxy.HttpSendInputStream.read(HttpSendInputStream.java:51)
 at sun.rmi.transport.proxy.RMIMasterSocketFactory.createSocket
 (RMIMasterSocketFactory.java:228)
 at sun.rmi.transport.tcp.TCPEndpoint.newSocket(TCPEndpoint.java:569)
 at sun.rmi.transport.tcp.TCPChannel.createConnection(TCPChannel.java:185)
 at sun.rmi.transport.tcp.TCPChannel.newConnection(TCPChannel.java:171)
 at sun.rmi.server.UnicastRef.newCall(UnicastRef.java:306)
 at sun.rmi.registry.RegistryImpl_Stub.lookup(Unknown Source)
 at ar.org.fitc.test.rmi.integration.RemoteHashClient.main(RemoteHashClient.java:73)
Mar 10, 2006 8:50:53 AM sun.rmi.transport.proxy.RMIMasterSocketFactory createSocket
FINE: main: factory failed:
java.io.IOException: HTTP request failed
 at sun.rmi.transport.proxy.HttpSendSocket.readNotify(HttpSendSocket.java:159)
 at sun.rmi.transport.proxy.HttpSendInputStream.read(HttpSendInputStream.java:51)
 at sun.rmi.transport.proxy.RMIMasterSocketFactory.createSocket
 (RMIMasterSocketFactory.java:228)
 at sun.rmi.transport.tcp.TCPEndpoint.newSocket(TCPEndpoint.java:569)
 at sun.rmi.transport.tcp.TCPChannel.createConnection(TCPChannel.java:185)
 at sun.rmi.transport.tcp.TCPChannel.newConnection(TCPChannel.java:171)
 at sun.rmi.server.UnicastRef.newCall(UnicastRef.java:306)


```
at sun.rmi.registry.RegistryImpl_Stub.lookup(Unknown Source)
at ar.org.fitc.test.rmi.integration.RemoteHashClient.main(RemoteHashClient.java:73)
Mar 10, 2006 8:50:53 AM sun.rmi.transport.proxy.RMIMasterSocketFactory createSocket
FINE: main: trying with factory: sun.rmi.transport.proxy.RMIHttpToCGISocketFactory@1193779
Mar 10, 2006 8:50:53 AM sun.rmi.transport.proxy.HttpSendSocket <init>
FINER: main: host = 10.100.2.246, port = 1099, url = http://10.100.2.246/cgi-bin/java-
rmi.cgi?forward=1099
Mar 10, 2006 8:50:53 AM sun.rmi.transport.proxy.HttpSendSocket readNotify
FINER: main: sending request and activating input stream
Mar 10, 2006 8:50:54 AM sun.rmi.transport.proxy.HttpSendSocket readNotify
FINE: main: failed to get input stream, exception:
java.io.IOException: Server returned HTTP response code: 503 for URL: http://10.100.2.246/cgi-
bin/java-rmi.cgi?forward=1099
at sun.net.www.protocol.http.HttpURLConnection.getInputStream(HttpURLConnection.java:1149)
at sun.rmi.transport.proxy.HttpSendSocket.readNotify(HttpSendSocket.java:154)
at sun.rmi.transport.proxy.HttpSendInputStream.read(HttpSendInputStream.java:51)
at sun.rmi.transport.proxy.RMIMasterSocketFactory.createSocket
(RMIMasterSocketFactory.java:228)
at sun.rmi.transport.tcp.TCPEndpoint.newSocket(TCPEndpoint.java:569)
at sun.rmi.transport.tcp.TCPChannel.createConnection(TCPChannel.java:185)
at sun.rmi.transport.tcp.TCPChannel.newConnection(TCPChannel.java:171)
at sun.rmi.server.UnicastRef.newCall(UnicastRef.java:306)
at sun.rmi.registry.RegistryImpl_Stub.lookup(Unknown Source)
at ar.org.fitc.test.rmi.integration.RemoteHashClient.main(RemoteHashClient.java:73)
Mar 10, 2006 8:50:54 AM sun.rmi.transport.proxy.RMIMasterSocketFactory createSocket
FINE: main: factory failed:
java.io.IOException: HTTP request failed
at sun.rmi.transport.proxy.HttpSendSocket.readNotify(HttpSendSocket.java:159)
at sun.rmi.transport.proxy.HttpSendInputStream.read(HttpSendInputStream.java:51)
at sun.rmi.transport.proxy.RMIMasterSocketFactory.createSocket
(RMIMasterSocketFactory.java:228)
at sun.rmi.transport.tcp.TCPEndpoint.newSocket(TCPEndpoint.java:569)
at sun.rmi.transport.tcp.TCPChannel.createConnection(TCPChannel.java:185)
at sun.rmi.transport.tcp.TCPChannel.newConnection(TCPChannel.java:171)
at sun.rmi.server.UnicastRef.newCall(UnicastRef.java:306)
at sun.rmi.registry.RegistryImpl_Stub.lookup(Unknown Source)
at ar.org.fitc.test.rmi.integration.RemoteHashClient.main(RemoteHashClient.java:73)
Mar 10, 2006 8:50:54 AM ar.org.fitc.test.rmi.integration.RemoteHashClient putCall
INFO: RemoteMapClient inserting on 10.100.2.246 key=one, value=pride
Exception in thread "main" java.lang.NullPointerException
at ar.org.fitc.test.rmi.integration.RemoteHashClient.putCall(RemoteHashClient.java:110)
at ar.org.fitc.test.rmi.integration.RemoteHashClient.populateHashMap(RemoteHashClient.java:100)
at ar.org.fitc.test.rmi.integration.RemoteHashClient.main(RemoteHashClient.java:80)
RemoteMapClient problem with RemoteMap, exception:
java.rmi.ConnectIOException: Exception creating connection to: 10.100.2.246; nested exception is:
java.net.NoRouteToHostException: connect timed out: 10.100.2.246
pride
```