

## Direct connection

Direct connection to the server using the JRMP protocol. This is the simplest method since only a server and a client are involved.



For this setting the following 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 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

#### Requirements

Two Computers that have 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)***

21/02/2006 13:09:45 ar.org.fitc.test.rmi.integration.RemoteCalculatorServer main

INFO: RemoteCalculator Server Ready.

Matrix A entered from 10.100.2.241

[9, 2]

[6, 4]

Matrix B entered from 10.100.2.241

[1, 4]

[1, 5]

multiply Matrix called from 10.100.2.241

Result Matrix (multiply)

[11, 46]

[10, 44]

multiply Matrix called from 10.100.2.241

Result Matrix (multiply)

[11, 46]

[10, 44]

Vector A entered from 10.100.2.241

[50.21, 2000.125, 196.15, 36.95]

get Standard Deviation and Average called from 10.100.2.241  
Standard Deviation: 955.5700453863042  
Average: 570.85875  
get Standard Deviation and Average called from 10.100.2.241  
Standard Deviation: 955.5700453863042  
Average: 570.85875

### ***Output Computer N° 2 (RemoteCalculatorClient)***

21/02/2006 13:09:50 ar.org.fitc.test.rmi.integration.RemoteCalculatorClient main  
INFO: RemoteCalculatorClient locating RMI registry on remote host "10.100.2.229".  
21/02/2006 13:09:52 ar.org.fitc.test.rmi.integration.RemoteCalculatorClient main  
INFO: RemoteCalculatorClient looking up service "RemoteCalculator".

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 (RemoteCalculatorServerB1)***

Mar 9, 2006 7:58:26 AM sun.rmi.transport.tcp.TCPEndpoint <clinit>

FINE: main: localhostKnown = true, localhost = 10.100.2.246

Mar 9, 2006 7:58:27 AM sun.rmi.transport.tcp.TCPTransport <init>

FINE: main: Version = 2, ep = [10.100.2.246:1099]

Mar 9, 2006 7:58:27 AM sun.rmi.transport.tcp.TCPEndpoint getLocalEndpoint

FINE: main: created local endpoint for socket factory null on port 1099

Mar 9, 2006 7:58:27 AM sun.rmi.transport.tcp.TCPTransport <init>

FINE: main: Version = 2, ep = [10.100.2.246:0]

Mar 9, 2006 7:58:27 AM sun.rmi.transport.tcp.TCPEndpoint getLocalEndpoint  
FINE: main: created local endpoint for socket factory null on port 0

Mar 9, 2006 7:58:27 AM sun.rmi.transport.tcp.TCPTransport listen  
FINE: main: (port 1099) create server socket

Mar 9, 2006 7:58:27 AM sun.rmi.transport.tcp.TCPEndpoint newServerSocket  
FINER: main: creating server socket on [10.100.2.246:1099]

Mar 9, 2006 7:58:27 AM sun.rmi.transport.tcp.TCPTransport listen  
FINE: main: (port 0) create server socket

Mar 9, 2006 7:58:27 AM sun.rmi.transport.tcp.TCPEndpoint newServerSocket  
FINER: main: creating server socket on [10.100.2.246:0]

Mar 9, 2006 7:58:27 AM sun.rmi.transport.tcp.TCPEndpoint setDefaultPort  
FINE: main: default port for server socket factory null and client socket factory null set to 43781

Mar 9, 2006 7:58:27 AM sun.rmi.transport.tcp.TCPTransport run  
FINE: RMI TCP Accept-1099: listening on port 1099

Mar 9, 2006 7:58:27 AM sun.rmi.transport.tcp.TCPTransport run  
FINE: RMI TCP Accept-0: listening on port 43781

Mar 9, 2006 7:58:27 AM ar.org.fitc.test.rmi.integration.RemoteCalculatorServerBI main  
INFO: RemoteCalculator Server Ready.

Mar 9, 2006 7:58:36 AM sun.rmi.transport.tcp.TCPTransport\$ConnectionHandler run  
FINE: RMI TCP Connection(8)-10.100.2.241: accepted socket from [10.100.2.241:56109]

Mar 9, 2006 7:58:36 AM sun.rmi.transport.tcp.TCPTransport\$ConnectionHandler run  
FINER: RMI TCP Connection(8)-10.100.2.241: (port 1099) suggesting 10.100.2.241:56109

Mar 9, 2006 7:58:36 AM sun.rmi.transport.tcp.TCPTransport\$ConnectionHandler run

FINER: RMI TCP Connection(8)-10.100.2.241: (port 1099) client using 10.100.2.241:0

Mar 9, 2006 7:58:36 AM sun.rmi.transport.tcp.TCPTransport handleMessages

FINE: RMI TCP Connection(8)-10.100.2.241: (port 1099) op = 80

Mar 9, 2006 7:58:36 AM sun.rmi.transport.StreamRemoteCall getInputStream

FINER: RMI TCP Connection(8)-10.100.2.241: getting input stream

Mar 9, 2006 7:58:36 AM sun.rmi.transport.Transport serviceCall

FINER: RMI TCP Connection(8)-10.100.2.241: call dispatcher

Mar 9, 2006 7:58:36 AM sun.rmi.transport.StreamRemoteCall getOutputStream

FINER: RMI TCP Connection(8)-10.100.2.241: getting output stream

Mar 9, 2006 7:58:36 AM sun.rmi.transport.tcp.TCPTransport\$ConnectionHandler run

FINE: RMI TCP Connection(11)-10.100.2.241: accepted socket from  
[10.100.2.241:42418]

Mar 9, 2006 7:58:36 AM sun.rmi.transport.tcp.TCPTransport\$ConnectionHandler run

FINER: RMI TCP Connection(11)-10.100.2.241: (port 43781) suggesting  
10.100.2.241:42418

Mar 9, 2006 7:58:36 AM sun.rmi.transport.tcp.TCPTransport\$ConnectionHandler run

FINER: RMI TCP Connection(11)-10.100.2.241: (port 43781) client using  
10.100.2.241:0

Mar 9, 2006 7:58:36 AM sun.rmi.transport.tcp.TCPTransport handleMessages

FINE: RMI TCP Connection(11)-10.100.2.241: (port 43781) op = 80

Mar 9, 2006 7:58:36 AM sun.rmi.transport.StreamRemoteCall getInputStream

FINER: RMI TCP Connection(11)-10.100.2.241: getting input stream

Mar 9, 2006 7:58:36 AM sun.rmi.transport.Transport serviceCall

FINER: RMI TCP Connection(11)-10.100.2.241: call dispatcher

Mar 9, 2006 7:58:36 AM sun.rmi.transport.StreamRemoteCall getOutputStream

FINER: RMI TCP Connection(11)-10.100.2.241: getting output stream

Mar 9, 2006 7:58:37 AM sun.rmi.transport.tcp.TCPTransport handleMessages

FINE: RMI TCP Connection(8)-10.100.2.241: (port 1099) op = 82

Mar 9, 2006 7:58:37 AM sun.rmi.transport.tcp.TCPTransport handleMessages

FINE: RMI TCP Connection(8)-10.100.2.241: (port 1099) op = 84

Mar 9, 2006 7:58:37 AM sun.rmi.transport.tcp.TCPTransport handleMessages

FINE: RMI TCP Connection(11)-10.100.2.241: (port 43781) op = 82

Mar 9, 2006 7:58:37 AM sun.rmi.transport.tcp.TCPTransport handleMessages

FINE: RMI TCP Connection(11)-10.100.2.241: (port 43781) op = 80

Mar 9, 2006 7:58:37 AM sun.rmi.transport.StreamRemoteCall getInputStream

FINER: RMI TCP Connection(11)-10.100.2.241: getting input stream

Mar 9, 2006 7:58:37 AM sun.rmi.transport.Transport serviceCall

FINER: RMI TCP Connection(11)-10.100.2.241: call dispatcher

Matrix A entered from 10.100.2.241

[9, 2]

[6, 4]

Mar 9, 2006 7:58:37 AM sun.rmi.transport.StreamRemoteCall getOutputStream

FINER: RMI TCP Connection(11)-10.100.2.241: getting output stream

Mar 9, 2006 7:58:37 AM sun.rmi.transport.tcp.TCPTransport handleMessages

FINE: RMI TCP Connection(11)-10.100.2.241: (port 43781) op = 80

Mar 9, 2006 7:58:37 AM sun.rmi.transport.StreamRemoteCall getInputStream

FINER: RMI TCP Connection(11)-10.100.2.241: getting input stream

Mar 9, 2006 7:58:37 AM sun.rmi.transport.Transport serviceCall

FINER: RMI TCP Connection(11)-10.100.2.241: call dispatcher

Mar 9, 2006 7:58:37 AM sun.rmi.transport.StreamRemoteCall getOutputStream

FINER: RMI TCP Connection(11)-10.100.2.241: getting output stream

Matrix B entered from 10.100.2.241

[1, 4]

[1, 5]

Mar 9, 2006 7:58:37 AM sun.rmi.transport.tcp.TCPTransport handleMessages

FINE: RMI TCP Connection(11)-10.100.2.241: (port 43781) op = 82

Mar 9, 2006 7:58:37 AM sun.rmi.transport.tcp.TCPTransport handleMessages

FINE: RMI TCP Connection(11)-10.100.2.241: (port 43781) op = 80

Mar 9, 2006 7:58:37 AM sun.rmi.transport.StreamRemoteCall getInputStream

FINER: RMI TCP Connection(11)-10.100.2.241: getting input stream

Mar 9, 2006 7:58:37 AM sun.rmi.transport.Transport serviceCall

FINER: RMI TCP Connection(11)-10.100.2.241: call dispatcher

Mar 9, 2006 7:58:37 AM sun.rmi.transport.StreamRemoteCall getOutputStream

FINER: RMI TCP Connection(11)-10.100.2.241: getting output stream

multiply Matrix called from 10.100.2.241

Result Matrix (multiply)

[11, 46]

[10, 44]

Mar 9, 2006 7:58:37 AM sun.rmi.transport.tcp.TCPTransport handleMessages

FINE: RMI TCP Connection(11)-10.100.2.241: (port 43781) op = 80

Mar 9, 2006 7:58:37 AM sun.rmi.transport.StreamRemoteCall getInputStream

FINER: RMI TCP Connection(11)-10.100.2.241: getting input stream

Mar 9, 2006 7:58:37 AM sun.rmi.transport.Transport serviceCall

FINER: RMI TCP Connection(11)-10.100.2.241: call dispatcher

Mar 9, 2006 7:58:37 AM sun.rmi.transport.StreamRemoteCall getOutputStream

FINER: RMI TCP Connection(11)-10.100.2.241: getting output stream

multiply Matrix called from 10.100.2.241

Result Matrix (multiply)

[11, 46]

[10, 44]

Mar 9, 2006 7:58:37 AM sun.rmi.transport.tcp.TCPTransport handleMessages

FINE: RMI TCP Connection(11)-10.100.2.241: (port 43781) op = 80

Mar 9, 2006 7:58:37 AM sun.rmi.transport.StreamRemoteCall getInputStream

FINER: RMI TCP Connection(11)-10.100.2.241: getting input stream

Mar 9, 2006 7:58:37 AM sun.rmi.transport.Transport serviceCall

FINER: RMI TCP Connection(11)-10.100.2.241: call dispatcher

Mar 9, 2006 7:58:37 AM sun.rmi.transport.StreamRemoteCall getOutputStream

FINER: RMI TCP Connection(11)-10.100.2.241: getting output stream

add Matrix called from 10.100.2.241

Result Matrix (add)

[10, 6]

[7, 9]

Mar 9, 2006 7:58:37 AM sun.rmi.transport.tcp.TCPTransport handleMessages

FINE: RMI TCP Connection(11)-10.100.2.241: (port 43781) op = 80

Mar 9, 2006 7:58:37 AM sun.rmi.transport.StreamRemoteCall getInputStream

FINER: RMI TCP Connection(11)-10.100.2.241: getting input stream

Mar 9, 2006 7:58:37 AM sun.rmi.transport.Transport serviceCall

FINER: RMI TCP Connection(11)-10.100.2.241: call dispatcher

Mar 9, 2006 7:58:37 AM sun.rmi.transport.StreamRemoteCall getOutputStream

FINER: RMI TCP Connection(11)-10.100.2.241: getting output stream

add Matrix called from 10.100.2.241

Result Matrix (add)

[10, 6]

[7, 9]

Mar 9, 2006 7:58:37 AM sun.rmi.transport.tcp.TCPTransport handleMessages

FINE: RMI TCP Connection(11)-10.100.2.241: (port 43781) op = 80

Mar 9, 2006 7:58:37 AM sun.rmi.transport.StreamRemoteCall getInputStream

FINER: RMI TCP Connection(11)-10.100.2.241: getting input stream

Mar 9, 2006 7:58:37 AM sun.rmi.transport.Transport serviceCall

FINER: RMI TCP Connection(11)-10.100.2.241: call dispatcher

Vector A entered from 10.100.2.241

[50.21, 2000.125, 196.15, 36.95]

Mar 9, 2006 7:58:37 AM sun.rmi.transport.StreamRemoteCall getOutputStream

FINER: RMI TCP Connection(11)-10.100.2.241: getting output stream

Mar 9, 2006 7:58:37 AM sun.rmi.transport.tcp.TCPTransport handleMessages

FINE: RMI TCP Connection(11)-10.100.2.241: (port 43781) op = 80

Mar 9, 2006 7:58:37 AM sun.rmi.transport.StreamRemoteCall getInputStream

FINER: RMI TCP Connection(11)-10.100.2.241: getting input stream

Mar 9, 2006 7:58:37 AM sun.rmi.transport.Transport serviceCall



FINER: RMI TCP Connection(11)-10.100.2.241: call dispatcher

Mar 9, 2006 7:58:37 AM sun.rmi.transport.StreamRemoteCall getOutputStream

FINER: RMI TCP Connection(11)-10.100.2.241: getting output stream

get Standard Deviation and Average called from 10.100.2.241

Standard Deviation: 955.5700453863042

Average: 570.85875

Mar 9, 2006 7:58:37 AM sun.rmi.transport.tcp.TCPTransport handleMessages

FINE: RMI TCP Connection(11)-10.100.2.241: (port 43781) op = 80

Mar 9, 2006 7:58:37 AM sun.rmi.transport.StreamRemoteCall getInputStream

FINER: RMI TCP Connection(11)-10.100.2.241: getting input stream

Mar 9, 2006 7:58:37 AM sun.rmi.transport.Transport serviceCall

FINER: RMI TCP Connection(11)-10.100.2.241: call dispatcher

Mar 9, 2006 7:58:37 AM sun.rmi.transport.StreamRemoteCall getOutputStream

FINER: RMI TCP Connection(11)-10.100.2.241: getting output stream

get Standard Deviation and Average called from 10.100.2.241

Standard Deviation: 955.5700453863042

Average: 570.85875

Mar 9, 2006 7:58:37 AM sun.rmi.transport.tcp.TCPTransport handleMessages

FINE: RMI TCP Connection(8)-10.100.2.241: (port 1099) connection closed

Mar 9, 2006 7:58:37 AM sun.rmi.transport.tcp.TCPConnection close

FINE: RMI TCP Connection(8)-10.100.2.241: close connection

Mar 9, 2006 7:58:37 AM sun.rmi.transport.tcp.TCPTransport handleMessages

FINE: RMI TCP Connection(11)-10.100.2.241: (port 43781) connection closed

Mar 9, 2006 7:58:37 AM sun.rmi.transport.tcp.TCPConnection close

FINE: RMI TCP Connection(11)-10.100.2.241: close connection

## ***Output Computer N° 2 (RemoteCalculatorClientB1)***

Mar 9, 2006 7:33:35 AM ar.org.fitc.test.rmi.integration.RemoteCalculatorClientBI main

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

Mar 9, 2006 7:33:35 AM sun.rmi.transport.tcp.TCPEndpoint <clinit>

FINE: main: localhostKnown = false, localhost = null

Mar 9, 2006 7:33:35 AM ar.org.fitc.test.rmi.integration.RemoteCalculatorClientBI main

INFO: RemoteCalculatorClient looking up service "RemoteCalculator".

Mar 9, 2006 7:33:35 AM sun.rmi.transport.tcp.TCPTransport <init>

FINE: main: Version = 2, ep = [:0]

Mar 9, 2006 7:33:35 AM sun.rmi.transport.tcp.TCPEndpoint getLocalEndpoint

FINE: main: created local endpoint for socket factory null on port 0

Mar 9, 2006 7:33:35 AM sun.rmi.transport.tcp.TCPChannel createConnection

FINE: main: create connection

Mar 9, 2006 7:33:35 AM sun.rmi.transport.tcp.TCPEndpoint newSocket

FINER: main: opening socket to [10.100.2.246:1099]

Mar 9, 2006 7:33:37 AM sun.rmi.transport.tcp.TCPChannel createConnection

FINER: main: server suggested 10.100.2.241:56109

Mar 9, 2006 7:33:37 AM sun.rmi.transport.tcp.TCPEndpoint setLocalHost

FINE: main: local host set to 10.100.2.241

Mar 9, 2006 7:33:37 AM sun.rmi.transport.tcp.TCPChannel createConnection

FINER: main: using 10.100.2.241:0

Mar 9, 2006 7:33:37 AM sun.rmi.transport.StreamRemoteCall <init>

FINER: main: write remote call header...

Mar 9, 2006 7:33:37 AM sun.rmi.transport.StreamRemoteCall getOutputStream

FINER: main: getting output stream

Mar 9, 2006 7:33:37 AM sun.rmi.transport.StreamRemoteCall getInputStream

FINER: main: getting input stream

Mar 9, 2006 7:33:37 AM sun.rmi.transport.tcp.TCPChannel free

FINE: main: reuse connection

Mar 9, 2006 7:33:37 AM sun.rmi.transport.tcp.TCPChannel free

FINE: main: create reaper

Mar 9, 2006 7:33:37 AM sun.rmi.transport.tcp.TCPChannel createConnection

FINE: main: create connection

Mar 9, 2006 7:33:37 AM sun.rmi.transport.tcp.TCPEndpoint newSocket

FINER: main: opening socket to [10.100.2.246:43781]

Mar 9, 2006 7:33:37 AM sun.rmi.transport.tcp.TCPChannel createConnection

FINER: main: server suggested 10.100.2.241:42418

Mar 9, 2006 7:33:37 AM sun.rmi.transport.tcp.TCPChannel createConnection

FINER: main: using 10.100.2.241:0

Mar 9, 2006 7:33:37 AM sun.rmi.transport.StreamRemoteCall <init>

FINER: main: write remote call header...

Mar 9, 2006 7:33:37 AM sun.rmi.transport.StreamRemoteCall getOutputStream

FINER: main: getting output stream

Mar 9, 2006 7:33:38 AM sun.rmi.transport.StreamRemoteCall getInputStream

FINER: main: getting input stream

Mar 9, 2006 7:33:38 AM sun.rmi.transport.tcp.TCPChannel free

FINE: main: reuse connection

Mar 9, 2006 7:33:38 AM sun.rmi.transport.tcp.TCPChannel free

FINE: main: create reaper

Mar 9, 2006 7:33:38 AM sun.rmi.transport.tcp.TCPChannel newConnection

FINE: main: reuse connection

Mar 9, 2006 7:33:38 AM sun.rmi.transport.tcp.TCPChannel free

FINE: main: reuse connection

Mar 9, 2006 7:33:38 AM sun.rmi.transport.tcp.TCPChannel newConnection

FINE: main: reuse connection

Mar 9, 2006 7:33:38 AM sun.rmi.transport.StreamRemoteCall <init>

FINER: main: write remote call header...

Mar 9, 2006 7:33:38 AM sun.rmi.transport.StreamRemoteCall getOutputStream

FINER: main: getting output stream

Mar 9, 2006 7:33:38 AM sun.rmi.transport.StreamRemoteCall getInputStream

FINER: main: getting input stream

Mar 9, 2006 7:33:38 AM sun.rmi.transport.tcp.TCPChannel free

FINE: main: reuse connection

Mar 9, 2006 7:33:38 AM sun.rmi.transport.tcp.TCPChannel newConnection

FINE: main: reuse connection

Mar 9, 2006 7:33:38 AM sun.rmi.transport.StreamRemoteCall <init>

FINER: main: write remote call header...

Mar 9, 2006 7:33:38 AM sun.rmi.transport.StreamRemoteCall getOutputStream

FINER: main: getting output stream

Mar 9, 2006 7:33:38 AM sun.rmi.transport.StreamRemoteCall getInputStream

FINER: main: getting input stream

Mar 9, 2006 7:33:38 AM sun.rmi.transport.tcp.TCPChannel free

FINE: main: reuse connection

Mar 9, 2006 7:33:38 AM sun.rmi.transport.tcp.TCPChannel newConnection  
FINE: main: reuse connection  
Mar 9, 2006 7:33:38 AM sun.rmi.transport.StreamRemoteCall <init>  
FINER: main: write remote call header...  
Mar 9, 2006 7:33:38 AM sun.rmi.transport.StreamRemoteCall getOutputStream  
FINER: main: getting output stream  
Mar 9, 2006 7:33:38 AM sun.rmi.transport.StreamRemoteCall getInputStream  
FINER: main: getting input stream  
Mar 9, 2006 7:33:38 AM sun.rmi.transport.tcp.TCPChannel free  
FINE: main: reuse connection  
Mar 9, 2006 7:33:38 AM sun.rmi.transport.tcp.TCPChannel newConnection  
FINE: main: reuse connection  
Mar 9, 2006 7:33:38 AM sun.rmi.transport.StreamRemoteCall <init>  
FINER: main: write remote call header...  
Mar 9, 2006 7:33:38 AM sun.rmi.transport.StreamRemoteCall getOutputStream  
FINER: main: getting output stream  
Mar 9, 2006 7:33:38 AM sun.rmi.transport.StreamRemoteCall getInputStream  
FINER: main: getting input stream  
Mar 9, 2006 7:33:38 AM sun.rmi.transport.tcp.TCPChannel free  
FINE: main: reuse connection  
Mar 9, 2006 7:33:38 AM sun.rmi.transport.tcp.TCPChannel newConnection  
FINE: main: reuse connection  
Mar 9, 2006 7:33:38 AM sun.rmi.transport.StreamRemoteCall <init>  
FINER: main: write remote call header...  
Mar 9, 2006 7:33:38 AM sun.rmi.transport.StreamRemoteCall getOutputStream

FINER: main: getting output stream

Mar 9, 2006 7:33:38 AM sun.rmi.transport.StreamRemoteCall getInputStream

FINER: main: getting input stream

Mar 9, 2006 7:33:38 AM sun.rmi.transport.tcp.TCPChannel free

FINE: main: reuse connection

Mar 9, 2006 7:33:38 AM sun.rmi.transport.tcp.TCPChannel newConnection

FINE: main: reuse connection

Mar 9, 2006 7:33:38 AM sun.rmi.transport.StreamRemoteCall <init>

FINER: main: write remote call header...

Mar 9, 2006 7:33:38 AM sun.rmi.transport.StreamRemoteCall getOutputStream

FINER: main: getting output stream

Mar 9, 2006 7:33:38 AM sun.rmi.transport.StreamRemoteCall getInputStream

FINER: main: getting input stream

Mar 9, 2006 7:33:38 AM sun.rmi.transport.tcp.TCPChannel free

FINE: main: reuse connection

Mar 9, 2006 7:33:38 AM sun.rmi.transport.tcp.TCPChannel newConnection

FINE: main: reuse connection

Mar 9, 2006 7:33:38 AM sun.rmi.transport.StreamRemoteCall <init>

FINER: main: write remote call header...

Mar 9, 2006 7:33:38 AM sun.rmi.transport.StreamRemoteCall getOutputStream

FINER: main: getting output stream

Mar 9, 2006 7:33:38 AM sun.rmi.transport.StreamRemoteCall getInputStream

FINER: main: getting input stream

Mar 9, 2006 7:33:38 AM sun.rmi.transport.tcp.TCPChannel free

FINE: main: reuse connection

Mar 9, 2006 7:33:38 AM sun.rmi.transport.tcp.TCPChannel newConnection

FINE: main: reuse connection

Mar 9, 2006 7:33:38 AM sun.rmi.transport.StreamRemoteCall <init>

FINER: main: write remote call header...

Mar 9, 2006 7:33:38 AM sun.rmi.transport.StreamRemoteCall getOutputStream

FINER: main: getting output stream

Mar 9, 2006 7:33:38 AM sun.rmi.transport.StreamRemoteCall getInputStream

FINER: main: getting input stream

Mar 9, 2006 7:33:38 AM sun.rmi.transport.tcp.TCPChannel free

FINE: main: reuse connection

Mar 9, 2006 7:33:38 AM sun.rmi.transport.tcp.TCPChannel newConnection

FINE: main: reuse connection

Mar 9, 2006 7:33:38 AM sun.rmi.transport.StreamRemoteCall <init>

FINER: main: write remote call header...

Mar 9, 2006 7:33:38 AM sun.rmi.transport.StreamRemoteCall getOutputStream

FINER: main: getting output stream

Mar 9, 2006 7:33:38 AM sun.rmi.transport.StreamRemoteCall getInputStream

FINER: main: getting input stream

Mar 9, 2006 7:33:38 AM sun.rmi.transport.tcp.TCPChannel free

FINE: main: reuse connection

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 (RemoteHashMapServer)***

```
23/02/2006 10:41:50 ar.org.ftc.test.rmi.integration.RemoteHashServer main
INFO: RemoteMapServer creating a local RMI registry on the default port.
23/02/2006 10:41:50 ar.org.ftc.test.rmi.integration.RemoteHashServer main
INFO: RemoteMapServer creating local object and remote adapter.
23/02/2006 10:41:50 ar.org.ftc.test.rmi.integration.RemoteHashServer main
INFO: RemoteMapServer publishing service "RemoteHashMap" in local registry.
23/02/2006 10:41:50 ar.org.ftc.test.rmi.integration.RemoteHashServer main
INFO: Published RemoteMap as service "RemoteHashMap". Ready.
23/02/2006 10:42:36 ar.org.ftc.test.rmi.integration.RemoteMapAdapter printStatus
INFO: Internal HashMap Status... Timestamp: 1140702156072
23/02/2006 10:42:36 ar.org.ftc.test.rmi.integration.RemoteMapAdapter printStatus
INFO: get() called 0 time(s)..
23/02/2006 10:42:36 ar.org.ftc.test.rmi.integration.RemoteMapAdapter printStatus
INFO: put() called 1 time(s)
23/02/2006 10:42:36 ar.org.ftc.test.rmi.integration.RemoteMapAdapter printStatus
INFO: Internal HashMap Status... Timestamp: 1140702156077
23/02/2006 10:42:36 ar.org.ftc.test.rmi.integration.RemoteMapAdapter printStatus
INFO: get() called 0 time(s)..
23/02/2006 10:42:36 ar.org.ftc.test.rmi.integration.RemoteMapAdapter printStatus
INFO: put() called 2 time(s)
23/02/2006 10:42:36 ar.org.ftc.test.rmi.integration.RemoteMapAdapter printStatus
INFO: Internal HashMap Status... Timestamp: 1140702156080
23/02/2006 10:42:36 ar.org.ftc.test.rmi.integration.RemoteMapAdapter printStatus
INFO: get() called 0 time(s)..
```





INFO: Internal HashMap Status... Timestamp: 1140702156143  
23/02/2006 10:42:36 ar.org.fitc.test.rmi.integration.RemoteMapAdapter printStatus  
INFO: get() called 7 time(s)..  
23/02/2006 10:42:36 ar.org.fitc.test.rmi.integration.RemoteMapAdapter printStatus  
INFO: put() called 7 time(s)

### ***Output Computer N° 2 (RemoteHashMapClient)***

RemoteMapClient locating RMI registry on remote host "10.100.2.229".

Feb 23, 2006 7:20:06 AM ar.org.fitc.test.rmi.integration.RemoteHashClient main  
INFO: RemoteMapClient looking up service "RemoteHashMap".  
Feb 23, 2006 7:20:08 AM ar.org.fitc.test.rmi.integration.RemoteHashClient putCall  
INFO: RemoteMapClient inserting on 10.100.2.229 key=one, value=pride  
Feb 23, 2006 7:20:08 AM ar.org.fitc.test.rmi.integration.RemoteHashClient putCall  
INFO: RemoteMapClient inserting on 10.100.2.229 key=two, value=envy  
Feb 23, 2006 7:20:08 AM ar.org.fitc.test.rmi.integration.RemoteHashClient putCall  
INFO: RemoteMapClient inserting on 10.100.2.229 key=three, value=gluttony  
Feb 23, 2006 7:20:08 AM ar.org.fitc.test.rmi.integration.RemoteHashClient putCall  
INFO: RemoteMapClient inserting on 10.100.2.229 key=four, value=lust  
Feb 23, 2006 7:20:08 AM ar.org.fitc.test.rmi.integration.RemoteHashClient putCall  
INFO: RemoteMapClient inserting on 10.100.2.229 key=five, value=anger  
Feb 23, 2006 7:20:08 AM ar.org.fitc.test.rmi.integration.RemoteHashClient putCall  
INFO: RemoteMapClient inserting on 10.100.2.229 key=six, value=greed  
Feb 23, 2006 7:20:08 AM ar.org.fitc.test.rmi.integration.RemoteHashClient putCall  
INFO: RemoteMapClient inserting on 10.100.2.229 key=seven, value=sloth  
RemoteMapClient HashMap successfully populated...  
Feb 23, 2006 7:20:08 AM ar.org.fitc.test.rmi.integration.RemoteHashClient sizeCall  
INFO: RemoteMapClient HashMap size: 7  
Feb 23, 2006 7:20:08 AM ar.org.fitc.test.rmi.integration.RemoteHashClient main  
INFO: RemoteMapClient HashMap size correct...  
Feb 23, 2006 7:20:08 AM ar.org.fitc.test.rmi.integration.RemoteHashClient getCall  
INFO: RemoteMapClient found at 10.100.2.229, value=pride  
Feb 23, 2006 7:20:08 AM ar.org.fitc.test.rmi.integration.RemoteHashClient getCall  
INFO: RemoteMapClient found at 10.100.2.229, value=envy  
Feb 23, 2006 7:20:08 AM ar.org.fitc.test.rmi.integration.RemoteHashClient getCall  
INFO: RemoteMapClient found at 10.100.2.229, value=gluttony  
Feb 23, 2006 7:20:08 AM ar.org.fitc.test.rmi.integration.RemoteHashClient getCall  
INFO: RemoteMapClient found at 10.100.2.229, value=lust  
Feb 23, 2006 7:20:08 AM ar.org.fitc.test.rmi.integration.RemoteHashClient getCall  
INFO: RemoteMapClient found at 10.100.2.229, value=anger  
Feb 23, 2006 7:20:08 AM ar.org.fitc.test.rmi.integration.RemoteHashClient getCall  
INFO: RemoteMapClient found at 10.100.2.229, value=greed  
Feb 23, 2006 7:20:08 AM ar.org.fitc.test.rmi.integration.RemoteHashClient getCall  
INFO: RemoteMapClient found at 10.100.2.229, value=sloth  
Feb 23, 2006 7:20:08 AM ar.org.fitc.test.rmi.integration.RemoteHashClient main  
INFO: RemoteMapClient HashMap check passed...

## **Execution Case N° 2**

### **Requirements**

A computer that has Linux as its operating system

The computer must execute RemoteCalculatorClient with the JDK 1.5.0 of SUN

### ***Output Computer N°1 (RemoteCalculatorClient)***

21/02/2006 13:25:12 ar.org.fitc.test.rmi.integration.RemoteCalculatorClient main

INFO: RemoteCalculatorClient locating RMI registry on remote host "10.100.2.229".  
21/02/2006 13:25:12 ar.org.fitc.test.rmi.integration.RemoteCalculatorClient main  
INFO: RemoteCalculatorClient looking up service "RemoteCalculator".  
21/02/2006 13:25:12 ar.org.fitc.test.rmi.integration.RemoteCalculatorClient main  
INFO: RemoteCalculatorClient problem with RemoteCalculator, exception:  
[java.rmi.ConnectException](#): Connection refused to host: 10.100.2.229; nested exception is:  
[java.net.ConnectException](#): Connection refused

### ***Output Computer N° 1 (RemoteHashMapClient)***

RemoteMapClient locating RMI registry on remote host "10.100.2.229".  
23/02/2006 10:47:24 ar.org.fitc.test.rmi.integration.RemoteHashClient main  
INFO: RemoteMapClient looking up service "RemoteHashMap".  
RemoteMapClient problem with RemoteMap, exception:  
[java.rmi.ConnectException](#): Connection refused to host: 10.100.2.229; nested exception is:  
[java.net.ConnectException](#): Connection refused  
23/02/2006 10:47:24 ar.org.fitc.test.rmi.integration.RemoteHashClient putCall  
INFO: RemoteMapClient inserting on 10.100.2.229 key=one, value=pride  
Exception in thread "main" [java.lang.NullPointerException](#)  
at ar.org.fitc.test.rmi.integration.RemoteHashClient.putCall([RemoteHashClient.java:102](#))  
at ar.org.fitc.test.rmi.integration.RemoteHashClient.populateHashMap([RemoteHashClient.java:92](#))  
at ar.org.fitc.test.rmi.integration.RemoteHashClient.main([RemoteHashClient.java:73](#))

### **Execution Case N° 3**

#### ***Requirements***

Two Computers that have Linux as their operating system  
Computer N° 1 must execute RemoteCalculatorServer with the JKD 1.5.0 of SUN  
Computer N° 2 must execute RemoteCalculatorClient with the JKD 1.5.0 and the jar  
of rmi provided by ITC in the bootclasspath

### ***Output Computer N°1 (RemoteCalculatorServer)***

21/02/2006 14:02:33 ar.org.fitc.test.rmi.integration.RemoteCalculatorServer main  
INFO: RemoteCalculator Server Ready.

### ***Output Computer N°2 (RemoteCalculatorClient)***

Feb 21, 2006 10:39:05 AM ar.org.fitc.test.rmi.integration.RemoteCalculatorClient main  
INFO: RemoteCalculatorClient locating RMI registry on remote host "10.100.2.229".  
Feb 21, 2006 10:39:06 AM ar.org.fitc.test.rmi.integration.RemoteCalculatorClient main  
INFO: RemoteCalculatorClient looking up service "RemoteCalculator".  
Feb 21, 2006 10:40:05 AM ar.org.fitc.test.rmi.integration.RemoteCalculatorClient main  
INFO: RemoteCalculatorClient problem with RemoteCalculator, exception:  
[java.rmi.ConnectIOException](#): I/O exception Creating Connection

### ***Output Computer N°1 (RemoteHashMapServer)***

23/02/2006 10:48:48 ar.org.fitc.test.rmi.integration.RemoteHashServer main  
INFO: RemoteMapServer creating a local RMI registry on the default port.  
23/02/2006 10:48:49 ar.org.fitc.test.rmi.integration.RemoteHashServer main  
INFO: RemoteMapServer creating local object and remote adapter.  
23/02/2006 10:48:49 ar.org.fitc.test.rmi.integration.RemoteHashServer main  
INFO: RemoteMapServer publishing service "RemoteHashMap" in local registry.  
23/02/2006 10:48:49 ar.org.fitc.test.rmi.integration.RemoteHashServer main  
INFO: Published RemoteMap as service "RemoteHashMap". Ready.

***Output Computer N°1 (RemotehashMapClient)***

RemoteMapClient locating RMI registry on remote host "10.100.2.229".

Feb 23, 2006 7:27:44 AM ar.org.fitc.test.rmi.integration.RemoteHashClient main

INFO: RemoteMapClient looking up service "RemoteHashMap".