

0.1. Scenario 1

Let us start by creating an easy static scenario to get anything under control and understand how all stack communication works. So, at the moment, no DNS will be involved.

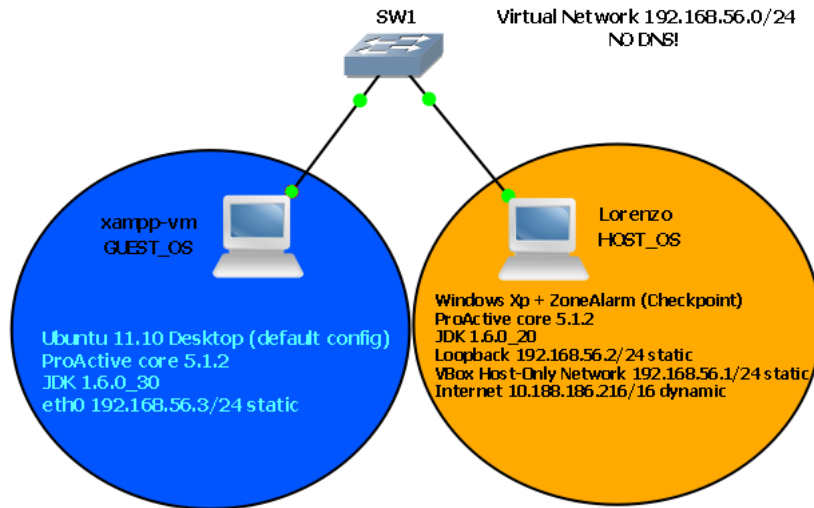


FIGURE 0.1. Scenario 1 topology

GuestOS: Here follow the main properties:

- Ubuntu 11.10 Desktop - Default on VirtualBox 4.1
- Hostname *xampp-vm*
- ProActive core 5.1.2 with JDK 1.6.0_30
- Network interfaces configuration at Figure 0.2

HostOS: Here follow the main properties:

- Windows Xp - Home Edition
- Hostname *Lorenzo*
- ZoneAlarm (Checkpoint product)
- ProActive core 5.1.2 with JDK 1.6.0_20
- Network interfaces configuration at Figure 0.1

0.1.1. Network and Software Integration. In order to let both systems discover each other, without a DNS, I setted a local naming resolving on them:

GuestOS: in Table 0.1

HostOS: in Table 0.2

Moreover, for overcoming blocking communication issues by host firewall, I put *192.168.56.0/24* network in a *trusted* zone with a *medium* security level. Otherwise, with an *high* level hosts can not neither *ping* each other.

From application point of view, since Host OS has more than one interface, we need to specify which one ProActive will use, according with http://proactive.inria.fr/trunk/Programming/ReferenceManual/multiple_html/netconfig.html:

```
xampp@xampp-vm: ~
eth0      Link encap:Ethernet  HWaddr 08:00:27:a4:53:08
          inet addr:192.168.56.3  Bcast:192.168.56.255  Mask:255.255.255.0
          inet6 addr: fe80::a00:27ff:fea4:5308/64 Scope:Link
          UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
          RX packets:30 errors:0 dropped:0 overruns:0 frame:0
          TX packets:73 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1000
          RX bytes:3927 (3.9 KB)  TX bytes:10449 (10.4 KB)

eth1      Link encap:Ethernet  HWaddr 08:00:27:9f:bf:27
          inet6 addr: fe80::a00:27ff:fe9f:bf27/64 Scope:Link
          UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
          RX packets:0 errors:0 dropped:0 overruns:0 frame:0
          TX packets:114 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1000
          RX bytes:0 (0.0 B)  TX bytes:13360 (13.3 KB)

lo        Link encap:Local Loopback
          inet addr:127.0.0.1  Mask:255.0.0.0
          inet6 addr: ::1/128 Scope:Host
          UP LOOPBACK RUNNING  MTU:16436  Metric:1
          RX packets:14 errors:0 dropped:0 overruns:0 frame:0
          TX packets:14 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:0
          RX bytes:1190 (1.1 KB)  TX bytes:1190 (1.1 KB)
```

FIGURE 0.2. *ifconfig* command at guest OS

```
Prompt dei comandi
Configurazione IP di Windows

Scheda Ethernet Loopback1 GNS3:

    Suffisso DNS specifico per connessione:
    Indirizzo IP. . . . . : 192.168.56.2
    Subnet mask . . . . . : 255.255.255.0
    Gateway predefinito . . . . . :

Scheda Ethernet accesso_internet_HOME:

    Suffisso DNS specifico per connessione:
    Indirizzo IP. . . . . : 10.188.186.216
    Subnet mask . . . . . : 255.255.0.0
    Gateway predefinito . . . . . : 10.188.0.1

Scheda Ethernet portatile-mansarda_via cross-cable(LAN):

    Stato supporto . . . . . : Supporto disconnesso

Scheda Ethernet VirtualBox Host-Only Network:

    Suffisso DNS specifico per connessione:
    Indirizzo IP. . . . . : 192.168.56.1
    Subnet mask . . . . . : 255.255.255.0
    Gateway predefinito . . . . . :
```

FIGURE 0.3. *ipconfig* command at host OS

```
<!-- Best practise: specify always these parameters (hosts often have
more than one interface , i.e. loopback for management) -->
<prop key="proactive.useIPAddress" value="true"/>
<prop key="proactive.hostname" value="Lorenzo"/> <!--never use "localhost"
@ server side!-->
<prop key="proactive.net.interface" value="VirtualBox Host-Only Network"/>
<prop key="proactive.net.netmask" value="192.168.56.0/24" />
```

and, on Guest OS,

```
<!-- Best practise: specify always these parameters (hosts often have
more than one interface , i.e. loopback for management) -->
<prop key="proactive.useIPAddress" value="true"/>
<prop key="proactive.hostname" value="xampp-vm"/>
```

```

127.0.0.1      localhost
192.168.56.1   Lorenzo
192.168.56.3   xampp-vm

# The following lines are desirable for IPv6 capable hosts
::1           ip6-localhost ip6-loopback
fe00::0       ip6-localnet
ff00::0       ip6-mcastprefix
ff02::1       ip6-allnodes
ff02::2       ip6-allrouters

```

TABLE 0.1. */etc/hosts* file at Guest OS

```

127.0.0.1      localhost
192.168.56.3   xampp-vm

```

TABLE 0.2. *C:\WINDOWS\system32\drivers\etc\hosts* file at Host OS

In such a way we *should* achieve the working communication at transport and application layer.

0.1.2. Launching application.

Server on Guest - Client on Host. I have communication at all levels.

Client on Guest - Server on Host. I can ping hosts each other and run client only on host OS, but no way to do that on guest OS. In fact, an application issue comes up on client side, by selecting the wrong interface.

I explicitly need to add *-Djava.rmi.server.hostname="192.168.56.1"* attribute to Java Virtual Machines to use the proper interface, otherwise other interfaces will be chosen.

Here there is the formal issue: http://bugs.sun.com/bugdatabase/view_bug.do?bug_id=4880793

CLIENT.LOG

```

2012-03-01 14:32:59.561::INFO: Logging to STDERR via org.mortbay.log.StdErrLog
2012-03-01 14:33:00.397::INFO: jetty-6.1.x
2012-03-01 14:33:01.113::INFO: Started SelectChannelConnector@0.0.0.0:39738
18900@xampp-vm - [INFO oactive.remoteobject] Remote Object Factory provider <pamr
, class org.objectweb.proactive.extensions.pamr.remoteobject.
PAMRRRemoteObjectFactory> found
18900@xampp-vm - [INFO oactive.remoteobject] Remote Object Factory provider <pnp,
class org.objectweb.proactive.extensions.pnp.PNPRemoteObjectFactory> found
18900@xampp-vm - [INFO oactive.remoteobject] Remote Object Factory provider <pnpss
, class org.objectweb.proactive.extensions.pnpssl.PNPSSLRemoteObjectFactory>
found
18900@xampp-vm - [INFO oactive.remoteobject] Remote Object Factory provider <
pamrd, class org.objectweb.proactive.extensions.pamrd.
PAMRDRemoteObjectFactorySPI$PAMRDRemoteObjectFactory> found
18900@xampp-vm - [INFO oactive.remoteobject] Remote Object Factory provider <
rmissl, class org.objectweb.proactive.extra.rmissl.RmiSslRemoteObjectFactory>
found
18900@xampp-vm - [INFO communication.rmi] Detected an existing RMI Registry on
port 1099
18900@xampp-vm - [DEBUG oactive.remoteobject] rmi://Lorenzo:1099/
myActiveServerObject looked up successfully
18900@xampp-vm - [INFO oactive.remoteobject] exception in remote object adapter
while forwarding the method call java.rmi.ConnectIOException: Exception
creating connection to: 192.168.56.2; nested exception is:
java.net.NoRouteToHostException: No route to host
at sun.rmi.transport.tcp.TCPEndpoint.newSocket(TCPEndpoint.java:614)

```

```

    at sun.rmi.transport.tcp.TCPChannel.createConnection(TCPChannel.java:198)
    at sun.rmi.transport.tcp.TCPChannel.newConnection(TCPChannel.java:184)
    at sun.rmi.server.UnicastRef.invoke(UnicastRef.java:110)
    at java.rmi.server.RemoteObjectInvocationHandler.invokeRemoteMethod(
        RemoteObjectInvocationHandler.java:178)
    at java.rmi.server.RemoteObjectInvocationHandler.invoke(
        RemoteObjectInvocationHandler.java:132)
    at $Proxy0.receiveMessage(Unknown Source)
    at org.objectweb.proactive.core.remoteobject.RemoteObjectAdapter.
        getRemoteObjectSet(RemoteObjectAdapter.java:465)
    at org.objectweb.proactive.core.remoteobject.RemoteObjectAdapter.<init>(
        RemoteObjectAdapter.java:172)
    at org.objectweb.proactive.core.remoteobject.rmi.
        AbstractRmiRemoteObjectFactory.lookup(AbstractRmiRemoteObjectFactory.
            java:262)
    at org.objectweb.proactive.core.remoteobject.RemoteObjectHelper.lookup(
        RemoteObjectHelper.java:163)
    at org.objectweb.proactive.api.PAActiveObject.lookupActive(PAActiveObject
        .java:1517)
    at org.objectweb.proactive.api.PAActiveObject.lookupActive(PAActiveObject
        .java:1487)
    at org.objectweb.proactive.examples.multiprotocol.MPClient.main(MPClient.
        java:51)
Caused by: java.net.NoRouteToHostException: No route to host
    at java.net.PlainSocketImpl.socketConnect(Native Method)
    at java.net.PlainSocketImpl.doConnect(PlainSocketImpl.java:351)
    at java.net.PlainSocketImpl.connectToAddress(PlainSocketImpl.java:213)
    at java.net.PlainSocketImpl.connect(PlainSocketImpl.java:200)
    at java.net.SocksSocketImpl.connect(SocksSocketImpl.java:366)
    at java.net.Socket.connect(Socket.java:529)
    at java.net.Socket.connect(Socket.java:478)
    at java.net.Socket.<init>(Socket.java:375)
    at java.net.Socket.<init>(Socket.java:189)
    at sun.rmi.transport.proxy.RMIDirectSocketFactory.createSocket(
        RMIDirectSocketFactory.java:22)
    at sun.rmi.transport.proxy.RMIMasterSocketFactory.createSocket(
        RMIMasterSocketFactory.java:128)
    at sun.rmi.transport.tcp.TCPEndpoint.newSocket(TCPEndpoint.java:595)
    ... 13 more
org.objectweb.proactive.core.exceptions.IOException6: Lookup
of org.objectweb.proactive.examples.multiprotocol.ServerObject at rmi
://Lorenzo:1099/myActiveServerObject failed
    at org.objectweb.proactive.api.PAActiveObject.lookupActive(PAActiveObject
        .java:1528)
    at org.objectweb.proactive.api.PAActiveObject.lookupActive(PAActiveObject
        .java:1487)
    at org.objectweb.proactive.examples.multiprotocol.MPClient.main(MPClient.
        java:51)
Caused by: org.objectweb.proactive.core.ProActiveException: java.lang.
NullPointerException
    at org.objectweb.proactive.core.remoteobject.RemoteObjectHelper.
        generatedObjectStub(RemoteObjectHelper.java:199)
    at org.objectweb.proactive.api.PAActiveObject.lookupActive(PAActiveObject
        .java:1519)
    ... 2 more
Caused by: java.lang.NullPointerException
    at org.objectweb.proactive.core.remoteobject.RemoteObjectAdapter.
        receiveMessage(RemoteObjectAdapter.java:183)
    at org.objectweb.proactive.core.remoteobject.RemoteObjectAdapter.
        getClassName(RemoteObjectAdapter.java:423)
    at org.objectweb.proactive.core.remoteobject.RemoteObjectHelper.
        generatedObjectStub(RemoteObjectHelper.java:181)

```

SERVER.LOG

```

Hello, I am the server!!
85763@Lorenzo - [DEBUG active.configuration] Registering ProActive properties
from class org.objectweb.proactive.core.config.CentralPAPropertyRepository
85763@Lorenzo - [DEBUG active.configuration] Registering ProActive properties
from class org.objectweb.proactive.core.ssh.proxycommand.ProxyCommandConfig
85763@Lorenzo - [DEBUG active.configuration] Registering ProActive properties
from class org.objectweb.proactive.extensions.pamr.PAMRConfig
85763@Lorenzo - [DEBUG active.configuration] Registering ProActive properties
from class org.objectweb.proactive.extensions.pnp.PNPConfig
85763@Lorenzo - [DEBUG active.configuration] Registering ProActive properties
from class org.objectweb.proactive.extensions.pnpssl.PNPSSLConfig
85763@Lorenzo - [DEBUG active.configuration] key: proactive.communication.pamr.
socketfactory --> value: plain
85763@Lorenzo - [DEBUG active.configuration] key: proactive.communication.pamr.
connect_timeout --> value:3000

```

```

85763@Lorenzo - [DEBUG active.configuration] key:proactive.pnps.port --> value:0
85763@Lorenzo - [DEBUG active.configuration] key:proactive.pnps.default_heartbeat
--> value:9000
85763@Lorenzo - [DEBUG active.configuration] key:proactive.pnps.idle_timeout -->
value:60000
85763@Lorenzo - [DEBUG active.configuration] key:proactive.pnps.authenticate -->
value:false
85763@Lorenzo - [DEBUG active.configuration] key:proactive.pnp.port --> value:0
85763@Lorenzo - [DEBUG active.configuration] key:proactive.pnp.default_heartbeat
--> value:9000
85763@Lorenzo - [DEBUG active.configuration] key:proactive.pnp.idle_timeout -->
value:60000
85763@Lorenzo - [DEBUG active.configuration] key:proactive.communication.ssh.
try_proxy_command --> value:false
85763@Lorenzo - [DEBUG active.configuration] key:proactive.communication.
benchmark.class --> value:org.objectweb.proactive.core.remoteobject.benchmark.
SelectionOnly
85763@Lorenzo - [DEBUG active.configuration] key:proactive.runtime.ping --> value
:false
85763@Lorenzo - [DEBUG active.configuration] key:proactive.runtime.ping.url -->
value:http://pinging.activeeon.com/ping.php
85763@Lorenzo - [DEBUG active.configuration] key:proactive.runtime.broadcast -->
value:false
85763@Lorenzo - [DEBUG active.configuration] key:proactive.runtime.broadcast.
address --> value:230.0.1.1
85763@Lorenzo - [DEBUG active.configuration] key:proactive.runtime.broadcast.port
--> value:4554
85763@Lorenzo - [DEBUG active.configuration] key:proactive.runtime.broadcast.
callback.class --> value:org.objectweb.proactive.core.runtime.broadcast.
BTCallbackDefaultImpl
85763@Lorenzo - [DEBUG active.configuration] Default Config File is: file:/C:/
Programmi/eclipse/workspace/ProActiveProgramming-5.1.2_core/classes/Core/org/
objectweb/proactive/core/config/ProActiveConfiguration.xml
85763@Lorenzo - [DEBUG active.configuration] key:proactive.stack_trace --> value:
false
85763@Lorenzo - [DEBUG active.configuration] key:proactive.pnp.port --> value
:12222 (OVERRIDE)
85763@Lorenzo - [DEBUG active.configuration] System property java.protocol.
handler.pkgs is not a ProActive property
85763@Lorenzo - [DEBUG active.configuration] Exported <java.protocol.handler.pkgs
, org.objectweb.proactive.core.ssh|org.objectweb.proactive.core.classloading.
protocols> as System property
85763@Lorenzo - [DEBUG active.configuration] key:java.protocol.handler.pkgs -->
value:org.objectweb.proactive.core.ssh|org.objectweb.proactive.core.
classloading.protocols
85763@Lorenzo - [DEBUG active.configuration] key:proactive.ssl.cipher.suites -->
value:SSL_DH_anon_WITH_RC4_128_MD5
85763@Lorenzo - [DEBUG active.configuration] key:proactive.mixedlocation.
maxMigrationNb --> value:-1
85763@Lorenzo - [DEBUG active.configuration] key:proactive.filetransfer.
blocks_number --> value:8
85763@Lorenzo - [DEBUG active.configuration] key:proactive.communication.
additional_protocols --> value:http,pnp
85763@Lorenzo - [DEBUG active.configuration] System property ibis.serialization
is not a ProActive property
85763@Lorenzo - [DEBUG active.configuration] Exported <ibis.serialization, ibis>
as System property
85763@Lorenzo - [DEBUG active.configuration] key:ibis.serialization --> value:
ibis
85763@Lorenzo - [DEBUG active.configuration] System property ibis.io.
serialization.classloader is not a ProActive property
85763@Lorenzo - [DEBUG active.configuration] Exported <ibis.io.serialization.
classloader, org.objectweb.proactive.core.mop.MOPClassLoader> as System
property
85763@Lorenzo - [DEBUG active.configuration] key:ibis.io.serialization.
classloader --> value:org.objectweb.proactive.core.mop.MOPClassLoader
85763@Lorenzo - [DEBUG active.configuration] System property ibis.name_server.
host is not a ProActive property
85763@Lorenzo - [DEBUG active.configuration] Exported <ibis.name_server.host,
localhost> as System property
85763@Lorenzo - [DEBUG active.configuration] key:ibis.name_server.host --> value:
localhost
85763@Lorenzo - [DEBUG active.configuration] key:proactive.tag.dsf --> value:
false
85763@Lorenzo - [DEBUG active.configuration] key:proactive.mop.writestubondisk
--> value:false
85763@Lorenzo - [DEBUG active.configuration] key:proactive.filetransfer.
blocks_size_kb --> value:512

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85763@Lorenzo - [DEBUG active.configuration] key:proactive.filetransfer.
services_number --> value:16
85763@Lorenzo - [DEBUG active.configuration] key:proactive.locationserver -->
value:org.objectweb.proactive.ext.locationserver.LocationServer
85763@Lorenzo - [DEBUG active.configuration] System property ibis.name_server.key
is not a ProActive property
85763@Lorenzo - [DEBUG active.configuration] Exported <ibis.name_server.key, 1>
as System property
85763@Lorenzo - [DEBUG active.configuration] key:ibis.name_server.key --> value:1
85763@Lorenzo - [DEBUG active.configuration] key:proactive.webservices.
elementformdefault --> value:false
85763@Lorenzo - [DEBUG active.configuration] Exported <gcm.provider, org.
objectweb.proactive.core.component.Fractive> as System property
85763@Lorenzo - [DEBUG active.configuration] key:gcm.provider --> value:org.
objectweb.proactive.core.component.Fractive
85763@Lorenzo - [DEBUG active.configuration] key:proactive.securitymanager -->
value:true
85763@Lorenzo - [DEBUG active.configuration] key:proactive.hostname --> value:
Lorenzo
85763@Lorenzo - [DEBUG active.configuration] key:proactive.mixedlocation.ttl -->
value:-1
85763@Lorenzo - [DEBUG active.configuration] key:proactive.filetransfer.
buffer_size_kb --> value:256
85763@Lorenzo - [DEBUG active.configuration] key:proactive.tagmemory.lease.max
--> value:60
85763@Lorenzo - [DEBUG active.configuration] key:proactive.net.netmask --> value
:192.168.56.0/24
85763@Lorenzo - [DEBUG active.configuration] Exported <schema.validation, true>
as System property
85763@Lorenzo - [DEBUG active.configuration] key:schema.validation --> value:true
85763@Lorenzo - [DEBUG active.configuration] key:proactive.webservices.framework
--> value:axis2
85763@Lorenzo - [DEBUG active.configuration] key:proactive.net.interface -->
value:VirtualBox Host-Only Network
85763@Lorenzo - [DEBUG active.configuration] key:proactive.implicitgetstubonthis
--> value:false
85763@Lorenzo - [DEBUG active.configuration] key:proactive.net.disableIPv6 -->
value:true
85763@Lorenzo - [DEBUG active.configuration] key:proactive.log4j.appender.
provider --> value:org.objectweb.proactive.core.util.log.remote.
ThrottlingProvider
85763@Lorenzo - [DEBUG active.configuration] key:components.creation.timeout -->
value:10000
85763@Lorenzo - [DEBUG active.configuration] key:proactive.rmi.port --> value
:1099
85763@Lorenzo - [DEBUG active.configuration] key:proactive.gcmd.unix.shell -->
value:/bin/sh
85763@Lorenzo - [DEBUG active.configuration] key:proactive.tagmemory.lease.period
--> value:21
85763@Lorenzo - [DEBUG active.configuration] key:proactive.communication.rmissh.
try_normal_first --> value:false
85763@Lorenzo - [DEBUG active.configuration] key:proactive.classloading.useHTTP
--> value:true
85763@Lorenzo - [DEBUG active.configuration] key:proactive.mixedlocation.
maxTimeOnSite --> value:-1
85763@Lorenzo - [DEBUG active.configuration] key:proactive.future.ac --> value:
true
85763@Lorenzo - [DEBUG active.configuration] key:proactive.communication.protocol
--> value:rmi
85763@Lorenzo - [DEBUG active.configuration] key:proactive.exit_on_empty -->
value:false
85763@Lorenzo - [DEBUG active.configuration] key:proactive.pnp.idle_timeout -->
value:10000 (OVERRIDE)
85763@Lorenzo - [DEBUG active.configuration] key:proactive.useIPAddress --> value
:true
85763@Lorenzo - [DEBUG active.configuration] key:proactive.masterworker.
compresstasks --> value:false
85763@Lorenzo - [DEBUG active.configuration] key:proactive.locationserver.rmi -->
value://localhost/LocationServer
85763@Lorenzo - [DEBUG active.configuration] key:proactive.runtime.stayalive -->
value:true
85763@Lorenzo - [DEBUG active.configuration] key:proactive.test.perf.duration -->
value:30000
85763@Lorenzo - [DEBUG active.configuration] key:proactive.masterworker.
pingperiod --> value:10000
85763@Lorenzo - [DEBUG active.configuration] key:proactive.pnp.default_heartbeat
--> value:9000 (OVERRIDE)
85763@Lorenzo - [DEBUG active.configuration] key:proactive.dgc --> value:false

```

```

85763@Lorenzo - [DEBUG active.configuration] key:proactive.mixedlocation.
               updatingForwarder --> value:false
85763@Lorenzo - [DEBUG active.configuration] System property java.runtime.name is
               not a ProActive property
85763@Lorenzo - [DEBUG active.configuration] key:java.runtime.name --> value:Java
               (TM) SE Runtime Environment
85763@Lorenzo - [DEBUG active.configuration] System property java.protocol.
               handler.pkgs is not a ProActive property
85763@Lorenzo - [DEBUG active.configuration] key:java.protocol.handler.pkgs -->
               value:org.objectweb.proactive.core.ssh|org.objectweb.proactive.core.
               classloading.protocols (OVERRIDE)
85763@Lorenzo - [DEBUG active.configuration] System property sun.boot.library.
               path is not a ProActive property
85763@Lorenzo - [DEBUG active.configuration] key:sun.boot.library.path --> value:
               C:\Programmi\Java\jre6\bin
85763@Lorenzo - [DEBUG active.configuration] System property java.vm.version is
               not a ProActive property
85763@Lorenzo - [DEBUG active.configuration] key:java.vm.version --> value:19.0-
               b09
85763@Lorenzo - [DEBUG active.configuration] System property java.vm.vendor is
               not a ProActive property
85763@Lorenzo - [DEBUG active.configuration] key:java.vm.vendor --> value:Sun
               Microsystems Inc.
85763@Lorenzo - [DEBUG active.configuration] System property java.vendor.url is
               not a ProActive property
85763@Lorenzo - [DEBUG active.configuration] key:java.vendor.url --> value:http
               ://java.sun.com/
85763@Lorenzo - [DEBUG active.configuration] System property path.separator is
               not a ProActive property
85763@Lorenzo - [DEBUG active.configuration] key:path.separator --> value;;
85763@Lorenzo - [DEBUG active.configuration] System property java.vm.name is not
               a ProActive property
85763@Lorenzo - [DEBUG active.configuration] key:java.vm.name --> value:Java
               HotSpot(TM) Client VM
85763@Lorenzo - [DEBUG active.configuration] System property file.encoding.pkg is
               not a ProActive property
85763@Lorenzo - [DEBUG active.configuration] key:file.encoding.pkg --> value:sun.
               io
85763@Lorenzo - [DEBUG active.configuration] System property sun.java.launcher is
               not a ProActive property
85763@Lorenzo - [DEBUG active.configuration] key:sun.java.launcher --> value:
               SUN_STANDARD
85763@Lorenzo - [DEBUG active.configuration] System property user.country is not
               a ProActive property
85763@Lorenzo - [DEBUG active.configuration] key:user.country --> value:IT
85763@Lorenzo - [DEBUG active.configuration] System property sun.os.patch.level
               is not a ProActive property
85763@Lorenzo - [DEBUG active.configuration] key:sun.os.patch.level --> value:
               Service Pack 3
85763@Lorenzo - [DEBUG active.configuration] System property ibis.serialization
               is not a ProActive property
85763@Lorenzo - [DEBUG active.configuration] key:ibis.serialization --> value:
               ibis (OVERRIDE)
85763@Lorenzo - [DEBUG active.configuration] System property ibis.io.
               serialization.classloader is not a ProActive property
85763@Lorenzo - [DEBUG active.configuration] key:ibis.io.serialization.
               classloader --> value:org.objectweb.proactive.core.mop.MOPClassLoader (
               OVERRIDE)
85763@Lorenzo - [DEBUG active.configuration] System property java.vm.
               specification.name is not a ProActive property
85763@Lorenzo - [DEBUG active.configuration] key:java.vm.specification.name -->
               value:Java Virtual Machine Specification
85763@Lorenzo - [DEBUG active.configuration] System property user.dir is not a
               ProActive property
85763@Lorenzo - [DEBUG active.configuration] key:user.dir --> value:C:\Programmi\
               eclipse\workspace\ProActiveProgramming-5.1.2_core
85763@Lorenzo - [DEBUG active.configuration] System property ibis.name_server.
               host is not a ProActive property
85763@Lorenzo - [DEBUG active.configuration] key:ibis.name_server.host --> value:
               localhost (OVERRIDE)
85763@Lorenzo - [DEBUG active.configuration] System property java.runtime.version
               is not a ProActive property
85763@Lorenzo - [DEBUG active.configuration] key:java.runtime.version --> value
               :1.6.0_23-b05
85763@Lorenzo - [DEBUG active.configuration] System property java.awt.graphicsenv
               is not a ProActive property
85763@Lorenzo - [DEBUG active.configuration] key:java.awt.graphicsenv --> value:
               sun.awt.Win32GraphicsEnvironment

```

```

85763@Lorenzo - [DEBUG active.configuration] System property java.endorsed.dirs
is not a ProActive property
85763@Lorenzo - [DEBUG active.configuration] key:java.endorsed.dirs --> value:C:\
Programmi\Java\jre6\lib\endorsed
85763@Lorenzo - [DEBUG active.configuration] System property os.arch is not a
ProActive property
85763@Lorenzo - [DEBUG active.configuration] key:os.arch --> value:x86
85763@Lorenzo - [DEBUG active.configuration] System property java.io.tmpdir is
not a ProActive property
85763@Lorenzo - [DEBUG active.configuration] key:java.io.tmpdir --> value:C:\
DOCUME~1\mixeli\IMPOST~1\Temp\
85763@Lorenzo - [DEBUG active.configuration] System property line.separator is
not a ProActive property
85763@Lorenzo - [DEBUG active.configuration] key:line.separator --> value:
85763@Lorenzo - [DEBUG active.configuration] System property java.vm.
specification.vendor is not a ProActive property
85763@Lorenzo - [DEBUG active.configuration] key:java.vm.specification.vendor -->
value:Sun Microsystems Inc.
85763@Lorenzo - [DEBUG active.configuration] System property user.variant is not
a ProActive property
85763@Lorenzo - [DEBUG active.configuration] key:user.variant --> value:
85763@Lorenzo - [DEBUG active.configuration] System property os.name is not a
ProActive property
85763@Lorenzo - [DEBUG active.configuration] key:os.name --> value:Windows XP
85763@Lorenzo - [DEBUG active.configuration] System property ibis.name_server.key
is not a ProActive property
85763@Lorenzo - [DEBUG active.configuration] key:ibis.name_server.key --> value:1
(OVERRIDE)
85763@Lorenzo - [DEBUG active.configuration] Exported <gcm.provider, org.
objectweb.proactive.core.component.Fractive> as System property
85763@Lorenzo - [DEBUG active.configuration] key:gcm.provider --> value:org.
objectweb.proactive.core.component.Fractive (OVERRIDE)
85763@Lorenzo - [DEBUG active.configuration] System property java.security.
manager is not a ProActive property
85763@Lorenzo - [DEBUG active.configuration] key:java.security.manager --> value:
85763@Lorenzo - [DEBUG active.configuration] System property sun.jnu.encoding is
not a ProActive property
85763@Lorenzo - [DEBUG active.configuration] key:sun.jnu.encoding --> value:
Cp1252
85763@Lorenzo - [DEBUG active.configuration] System property java.library.path is
not a ProActive property
85763@Lorenzo - [DEBUG active.configuration] key:java.library.path --> value:C:\
Programmi\Java\jre6\bin\.;C:\WINDOWS\Sun\Java\bin;C:\WINDOWS\system32;C:\
WINDOWS;C:/Programmi/Java/jre6/bin/client;C:/Programmi/Java/jre6/bin;C:/
Programmi/Java/jre6/lib/i386;C:\WINDOWS\system32;C:\WINDOWS;C:\WINDOWS\
System32\Wbem;c:\Programmi\ATI Technologies\ATI.ACE\;"C:\Programmi\Zone Labs\
ZoneAlarm\MailFrontier";c:\Programmi\Microsoft SQL Server\100\Tools\Binn\c:\
Programmi\Microsoft SQL Server\100\DTS\Binn\;C:\PROGRA~1\GTK\bin;C:\Programmi
\Microsoft Visual Studio\Common\Tools\WinNT;C:\Programmi\Microsoft Visual
Studio\Common\MSDev98\Bin;C:\Programmi\Microsoft Visual Studio\Common\Tools;C
:\Programmi\Microsoft Visual Studio\VC98\bin;C:\Programmi\MiKTeX 2.5\miktex\
bin;C:\Programmi\Java\jdk1.6.0_20\bin;;C:\Programmi\eclipse;
85763@Lorenzo - [DEBUG active.configuration] System property java.specification.
name is not a ProActive property
85763@Lorenzo - [DEBUG active.configuration] key:java.specification.name -->
value:Java Platform API Specification
85763@Lorenzo - [DEBUG active.configuration] System property java.class.version
is not a ProActive property
85763@Lorenzo - [DEBUG active.configuration] key:java.class.version --> value
:50.0
85763@Lorenzo - [DEBUG active.configuration] Exported <schema.validation, true>
as System property
85763@Lorenzo - [DEBUG active.configuration] key:schema.validation --> value:true
(OVERRIDE)
85763@Lorenzo - [DEBUG active.configuration] System property sun.management.
compiler is not a ProActive property
85763@Lorenzo - [DEBUG active.configuration] key:sun.management.compiler -->
value:HotSpot Client Compiler
85763@Lorenzo - [DEBUG active.configuration] System property os.version is not a
ProActive property
85763@Lorenzo - [DEBUG active.configuration] key:os.version --> value:5.1
85763@Lorenzo - [DEBUG active.configuration] System property user.home is not a
ProActive property
85763@Lorenzo - [DEBUG active.configuration] key:user.home --> value:C:\Documents
and Settings\mixeli
85763@Lorenzo - [DEBUG active.configuration] Exported <java.security.policy, C:\
Programmi\eclipse\workspace\ProActiveProgramming-5.1.2_core\examples\
proactive.java.policy> as System property

```



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85763@Lorenzo - [DEBUG active.configuration] key:java.security.policy --> value:C
:\Programmi\eclipse\workspace\ProActiveProgramming-5.1.2_core\examples\
proactive.java.policy
85763@Lorenzo - [DEBUG active.configuration] System property user.timezone is not
a ProActive property
85763@Lorenzo - [DEBUG active.configuration] key:user.timezone --> value:
85763@Lorenzo - [DEBUG active.configuration] System property java.awt.printerjob
is not a ProActive property
85763@Lorenzo - [DEBUG active.configuration] key:java.awt.printerjob --> value:
sun.awt.windows.WPrinterJob
85763@Lorenzo - [DEBUG active.configuration] System property file.encoding is not
a ProActive property
85763@Lorenzo - [DEBUG active.configuration] key:file.encoding --> value:Cp1252
85763@Lorenzo - [DEBUG active.configuration] System property java.specification.
version is not a ProActive property
85763@Lorenzo - [DEBUG active.configuration] key:java.specification.version -->
value:1.6
85763@Lorenzo - [DEBUG active.configuration] System property java.class.path is
not a ProActive property
[...]
85763@Lorenzo - [DEBUG active.configuration] System property user.name is not a
ProActive property
85763@Lorenzo - [DEBUG active.configuration] key:user.name --> value:mixtli
85763@Lorenzo - [DEBUG active.configuration] System property java.vm.
specification.version is not a ProActive property
85763@Lorenzo - [DEBUG active.configuration] key:java.vm.specification.version
--> value:1.0
85763@Lorenzo - [DEBUG active.configuration] System property java.home is not a
ProActive property
85763@Lorenzo - [DEBUG active.configuration] key:java.home --> value:C:\Programmi
\Java\jre6
85763@Lorenzo - [DEBUG active.configuration] System property sun.arch.data.model
is not a ProActive property
85763@Lorenzo - [DEBUG active.configuration] key:sun.arch.data.model --> value:32
85763@Lorenzo - [DEBUG active.configuration] System property user.language is not
a ProActive property
85763@Lorenzo - [DEBUG active.configuration] key:user.language --> value:it
85763@Lorenzo - [DEBUG active.configuration] System property java.specification.
vendor is not a ProActive property
85763@Lorenzo - [DEBUG active.configuration] key:java.specification.vendor -->
value:Sun Microsystems Inc.
85763@Lorenzo - [DEBUG active.configuration] System property awt.toolkit is not a
ProActive property
85763@Lorenzo - [DEBUG active.configuration] key:awt.toolkit --> value:sun.awt.
windows.WToolkit
85763@Lorenzo - [DEBUG active.configuration] System property java.vm.info is not
a ProActive property
85763@Lorenzo - [DEBUG active.configuration] key:java.vm.info --> value:mixed
mode, sharing
85763@Lorenzo - [DEBUG active.configuration] System property java.version is not
a ProActive property
85763@Lorenzo - [DEBUG active.configuration] key:java.version --> value:1.6.0_23
85763@Lorenzo - [DEBUG active.configuration] System property java.ext.dirs is not
a ProActive property
85763@Lorenzo - [DEBUG active.configuration] key:java.ext.dirs --> value:C:\
Programmi\Java\jre6\lib\ext;C:\WINDOWS\Sun\Java\lib\ext
85763@Lorenzo - [DEBUG active.configuration] System property sun.boot.class.path
is not a ProActive property
85763@Lorenzo - [DEBUG active.configuration] key:sun.boot.class.path --> value:C
:\Programmi\Java\jre6\lib\resources.jar;C:\Programmi\Java\jre6\lib\rt.jar;C:\
Programmi\Java\jre6\lib\sunrsasign.jar;C:\Programmi\Java\jre6\lib\jsse.jar;C
:\Programmi\Java\jre6\lib\jce.jar;C:\Programmi\Java\jre6\lib\charsets.jar;C\
Programmi\Java\jre6\lib\modules\jdk.boot.jar;C:\Programmi\Java\jre6\classes
85763@Lorenzo - [DEBUG active.configuration] System property java.vendor is not a
ProActive property
85763@Lorenzo - [DEBUG active.configuration] key:java.vendor --> value:Sun
Microsystems Inc.
85763@Lorenzo - [DEBUG active.configuration] System property file.separator is
not a ProActive property
85763@Lorenzo - [DEBUG active.configuration] key:file.separator --> value:\
85763@Lorenzo - [DEBUG active.configuration] System property java.vendor.url.bug
is not a ProActive property
85763@Lorenzo - [DEBUG active.configuration] key:java.vendor.url.bug --> value:
http://java.sun.com/cgi-bin/bugreport.cgi
85763@Lorenzo - [DEBUG active.configuration] System property sun.io.unicode.
encoding is not a ProActive property
85763@Lorenzo - [DEBUG active.configuration] key:sun.io.unicode.encoding -->
value:UnicodeLittle

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85763@Lorenzo - [DEBUG active.configuration] System property sun.cpu.endian is
not a ProActive property
85763@Lorenzo - [DEBUG active.configuration] key:sun.cpu.endian --> value:little
85763@Lorenzo - [DEBUG active.configuration] System property sun.desktop is not a
ProActive property
85763@Lorenzo - [DEBUG active.configuration] key:sun.desktop --> value:windows
85763@Lorenzo - [DEBUG active.configuration] System property sun.cpu.isalist is
not a ProActive property
85763@Lorenzo - [DEBUG active.configuration] key:sun.cpu.isalist --> value:
pentium_pro+mmx pentium_pro pentium+mmx pentium i486 i386 i86
85763@Lorenzo - [DEBUG onfiguration.network] proactive.hostname defined. Using
getByName() to elected an IP address
2012-03-05 18:16:58.234::INFO: Logging to STDERR via org.mortbay.log.StdErrLog
2012-03-05 18:16:59.843::INFO: jetty-6.1.x
2012-03-05 18:17:00.703::INFO: Started SelectChannelConnector@0.0.0.0:3041
85763@Lorenzo - [DEBUG active.configuration] key:proactive.http.port --> value
:3041
85763@Lorenzo - [DEBUG active.configuration] Exported <java.rmi.server.codebase,
http://Lorenzo:3041/proactive/classServer/> as System property
85763@Lorenzo - [DEBUG active.configuration] key:java.rmi.server.codebase -->
value:http://Lorenzo:3041/proactive/classServer/
85763@Lorenzo - [INFO oactive.remoteobject] Remote Object Factory provider <pamr,
class org.objectweb.proactive.extensions.pamr.remoteobject.
PAMRRRemoteObjectFactory> found
85763@Lorenzo - [INFO oactive.remoteobject] Remote Object Factory provider <pnp,
class org.objectweb.proactive.extensions.pnp.PNPRemoteObjectFactory> found
85763@Lorenzo - [INFO oactive.remoteobject] Remote Object Factory provider <pnpss,
class org.objectweb.proactive.extensions.pnpssl.PNPSSLRemoteObjectFactory>
found
85763@Lorenzo - [INFO oactive.remoteobject] Remote Object Factory provider <pamrd,
class org.objectweb.proactive.extensions.pamrd.
PAMRDRemoteObjectFactorySPI$PAMRDRemoteObjectFactory> found
85763@Lorenzo - [INFO oactive.remoteobject] Remote Object Factory provider <
rmssl, class org.objectweb.proactive.extra.rmssl.RmISslRemoteObjectFactory>
found
85763@Lorenzo - [DEBUG active.configuration] Exported <java.rmi.server.codebase,
http://Lorenzo:3041/proactive/classServer/ http://Lorenzo:3041/proactive/
classServer/> as System property
85763@Lorenzo - [DEBUG active.configuration] key:java.rmi.server.codebase -->
value:http://Lorenzo:3041/proactive/classServer/ http://Lorenzo:3041/
proactive/classServer/ (OVERRIDE)
85763@Lorenzo - [INFO communication.rmi] Created a new registry on port 1099
85763@Lorenzo - [DEBUG oactive.remoteobject] successfully bound in registry at
rmi://Lorenzo:1099/PA_JVM964518626
85763@Lorenzo - [DEBUG oactive.remoteobject] registered remote object at
PA_JVM964518626
85763@Lorenzo - [DEBUG oactive.remoteobject] registering remote object at
endpoint http://Lorenzo:3041/PA_JVM964518626
85763@Lorenzo - [DEBUG oactive.remoteobject] [Multi-Protocol] Object
PA_JVM964518626 expose with additionnal protocol : http
85763@Lorenzo - [DEBUG oactive.remoteobject] [Multi-Protocol] Object
PA_JVM964518626 expose with additionnal protocol : pnp
85763@Lorenzo - [DEBUG active.configuration] Exported <proactive.codebase, http
://Lorenzo:3041/proactive/classServer/> as System property
85763@Lorenzo - [DEBUG active.configuration] key:proactive.codebase --> value:
http://Lorenzo:3041/proactive/classServer/
85763@Lorenzo - [DEBUG active.configuration] Exported <proactive.codebase, http
://Lorenzo:3041/proactive/classServer/> as System property
85763@Lorenzo - [DEBUG active.configuration] key:proactive.codebase --> value:
http://Lorenzo:3041/proactive/classServer/ (OVERRIDE)
85763@Lorenzo - [DEBUG oactive.remoteobject] successfully bound in registry at
rmi://Lorenzo:1099/Node1787971128
85763@Lorenzo - [DEBUG oactive.remoteobject] registered remote object at
Node1787971128
85763@Lorenzo - [DEBUG oactive.remoteobject] registering remote object at
endpoint http://Lorenzo:3041/Node1787971128
85763@Lorenzo - [DEBUG oactive.remoteobject] [Multi-Protocol] Object
Node1787971128 expose with additionnal protocol : http
85763@Lorenzo - [DEBUG oactive.remoteobject] [Multi-Protocol] Object
Node1787971128 expose with additionnal protocol : pnp
85763@Lorenzo - [DEBUG oactive.remoteobject] rmi://Lorenzo:1099/Node1787971128
looked up successfully
85763@Lorenzo - [DEBUG oactive.remoteobject] successfully bound in registry at
rmi://Lorenzo:1099/75eaa4f6-135e3dd0afd-7ff3-2c7ed44141ba7643-75eaa4f6-135
e3dd0afd-8000
85763@Lorenzo - [DEBUG oactive.remoteobject] registered remote object at 75eaa4f6
-135e3dd0afd-7ff3-2c7ed44141ba7643-75eaa4f6-135e3dd0afd-8000

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85763@Lorenzo - [DEBUG oactive.remoteobject] registering remote object at
endpoint http://Lorenzo:3041/75eaa4f6-135e3dd0afd--7ff3--2c7ed44141ba7643-75
eaa4f6-135e3dd0afd--8000
85763@Lorenzo - [DEBUG oactive.remoteobject] [Multi-Protocol] Object 75eaa4f6-135
e3dd0afd--7ff3--2c7ed44141ba7643-75eaa4f6-135e3dd0afd--8000 expose with
additionnal protocol : http
85763@Lorenzo - [DEBUG oactive.remoteobject] [Multi-Protocol] Object 75eaa4f6-135
e3dd0afd--7ff3--2c7ed44141ba7643-75eaa4f6-135e3dd0afd--8000 expose with
additionnal protocol : pnp
85763@Lorenzo - [DEBUG runtime.node] NodeFactory: getNode() for rmi://Lorenzo
:1099/Node1787971128
85763@Lorenzo - [DEBUG proactive.runtime] proActiveRunTimeURL rmi://Lorenzo:1099/
Node1787971128
85763@Lorenzo - [DEBUG oactive.remoteobject] rmi://Lorenzo:1099/Node1787971128
looked up successfully
85763@Lorenzo - [DEBUG runtime.node] NodeFactory: getNode() for rmi://Lorenzo
:1099/Node1787971128
85763@Lorenzo - [DEBUG proactive.runtime] proActiveRunTimeURL rmi://Lorenzo:1099/
Node1787971128
85763@Lorenzo - [DEBUG oactive.remoteobject] rmi://Lorenzo:1099/Node1787971128
looked up successfully
85763@Lorenzo - [DEBUG proactive.body] Starting Body
85763@Lorenzo - [DEBUG proactive.body] Body run on node rmi://Lorenzo:1099/
Node1787971128 migration=false
85763@Lorenzo - [DEBUG proactive.runtime] nodeName Node1787971128
85763@Lorenzo - [DEBUG oactive.remoteobject] successfully bound in registry at
rmi://Lorenzo:1099/___PA___HalfbodiesNode1625170536
85763@Lorenzo - [DEBUG oactive.remoteobject] registered remote object at
___PA___HalfbodiesNode1625170536
85763@Lorenzo - [DEBUG oactive.remoteobject] registering remote object at
endpoint http://Lorenzo:3041/___PA___HalfbodiesNode1625170536
85763@Lorenzo - [DEBUG oactive.remoteobject] [Multi-Protocol] Object
___PA___HalfbodiesNode1625170536 expose with additionnal protocol : http
85763@Lorenzo - [DEBUG oactive.remoteobject] [Multi-Protocol] Object
___PA___HalfbodiesNode1625170536 expose with additionnal protocol : pnp
85763@Lorenzo - [DEBUG oactive.remoteobject] rmi://Lorenzo:1099/
___PA___HalfbodiesNode1625170536 looked up successfully
85763@Lorenzo - [DEBUG oactive.remoteobject] successfully bound in registry at
rmi://Lorenzo:1099/75eaa4f6-135e3dd0afd--7fd9--2c7ed44141ba7643-75eaa4f6-135
e3dd0afd--8000
85763@Lorenzo - [DEBUG oactive.remoteobject] registered remote object at 75eaa4f6
-135e3dd0afd--7fd9--2c7ed44141ba7643-75eaa4f6-135e3dd0afd--8000
85763@Lorenzo - [DEBUG oactive.remoteobject] registering remote object at
endpoint http://Lorenzo:3041/75eaa4f6-135e3dd0afd--7fd9--2c7ed44141ba7643-75
eaa4f6-135e3dd0afd--8000
85763@Lorenzo - [DEBUG oactive.remoteobject] [Multi-Protocol] Object 75eaa4f6-135
e3dd0afd--7fd9--2c7ed44141ba7643-75eaa4f6-135e3dd0afd--8000 expose with
additionnal protocol : http
85763@Lorenzo - [DEBUG oactive.remoteobject] [Multi-Protocol] Object 75eaa4f6-135
e3dd0afd--7fd9--2c7ed44141ba7643-75eaa4f6-135e3dd0afd--8000 expose with
additionnal protocol : pnp
85763@Lorenzo - [DEBUG runtime.node] NodeFactory: getNode() for rmi://Lorenzo
:1099/___PA___HalfbodiesNode1625170536
85763@Lorenzo - [DEBUG proactive.runtime] proActiveRunTimeURL rmi://Lorenzo:1099/
___PA___HalfbodiesNode1625170536
85763@Lorenzo - [DEBUG oactive.remoteobject] rmi://Lorenzo:1099/
___PA___HalfbodiesNode1625170536 looked up successfully
85763@Lorenzo - [DEBUG oactive.remoteobject] registered remote object at
myActiveServerObject
85763@Lorenzo - [DEBUG oactive.remoteobject] registering remote object at
endpoint http://Lorenzo:3041/myActiveServerObject
85763@Lorenzo - [DEBUG oactive.remoteobject] successfully bound in registry at
rmi://Lorenzo:1099/myActiveServerObject
85763@Lorenzo - [DEBUG oactive.remoteobject] [Multi-protocol] Benchmark choose :
org.objectweb.proactive.core.remoteobject.benchmark.SelectionOnly
This is what client, by remote calling, sent me :
Here I am, server! This is CLIENT_2
85763@Lorenzo - [DEBUG oactive.remoteobject] [Multi-protocol] Benchmark result
for rmi://Lorenzo:1099/-3504cc1f-135e3e04e80--7ff6--2c7ed44141ba7643--3504
cc1f-135e3e04e80--8000 is OK
This is what client, by remote calling, sent me :
Here I am, server! This is CLIENT_2
85763@Lorenzo - [DEBUG oactive.remoteobject] [Multi-protocol] Benchmark result
for http://Lorenzo:3078/-3504cc1f-135e3e04e80--7ff6--2c7ed44141ba7643--3504
cc1f-135e3e04e80--8000 is OK
85763@Lorenzo - [DEBUG oactive.remoteobject] [Multi-Protocol] -3504cc1f-135
e3e04e80--7ff6--2c7ed44141ba7643--3504cc1f-135e3e04e80--8000 received
protocol order: [rmi, http]

```

```
85763@Lorenzo - [DEBUG oactive.remoteobject] [Multi-Protocol] -3504cc1f-135
e3e04e80--7ff6--2c7ed44141ba7643--3504cc1f-135e3e04e80--8000 received
protocol order: [rmi, http]
```