

Sistemas Distribuidos

Timeout en RMI

PARA EL EJERCICIO 6

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We need to be able to timeout an RMI call if our server is hung up or takes a long time to process the call. The problem is that there does not seem to be any RMI parameter to do this. We use BEA Weblogic RMI and this (nor Standard RMI) allow for timeouts. The RMI calls we are making run in a separate thread and it might be possible to kill the call ourselves if we could kill the thread but now that Thread.stop() is deprecated, I don't see an easy way to do this either. Does anyone have any idea how to implement a timeout to an RMI call?

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Hi Edwin,

RMI has a hook for this. Your client can set any timeout you want by setting the RMISocketFactory, e.g.

```
class TimeoutFactory extends RMISocketFactory {
    private int timeout;
    public TimeoutFactory(int timeout) {
        this.timeout = timeout;
    }

    public Socket createSocket(String host, int port) throws IOException {
        Socket ret = getDefaultSocketFactory().createSocket(host, port);
        ret.setSoTimeout(timeout * 1000);
        return ret;
    }

    public ServerSocket createServerSocket(int port) throws IOException {
        return getDefaultSocketFactory().createServerSocket(port);
    }
}
```

To use the timeout factory just add the following code before doing any RMI work on the client:

```
//sets timeout to 5 seconds
```

```
RMIConnectionFactory.setConnectionFactory(new TimeoutFactory(5));
```

```
import java.rmi.server.RMIClientSocketFactory;
```

```
import java.net.Socket;
```

```
import java.io.IOException;
```

```
import java.io.Serializable;
```

```
public class TimedRMIClientSocketFactory
```

```
    implements RMIClientSocketFactory, Serializable
```

```
    {
```

```
        public Socket createSocket(String host, int port) throws IOException
```

```
        {
```

```
            Socket s = new Socket(host, port);
```

```
            s.setSoTimeout(10000); // ms
```

```
            return s;
```

```
        }
```

```
    }
```