Advanced

TomEE has several JNDI client intended for multiple usages.

Default one

In a standalone instance you generally don't need (or want) to specify anything to do a lookup. Doing so you will inherit from the contextual environment:

```
final Context ctx = new InitialContext();
ctx.lookup("java:....");
```

LocalInitialContextFactory

This is the legacy context factory used by OpenEJB. It is still useful to fallback on the "default" one in embedded mode where sometimes classloaders or libraries can mess up the automatic conextual context.

Usage:

```
Properties properties = new Properties();
properties.setProperty(Context.INITIAL_CONTEXT_FACTORY,
"org.apache.openejb.core.LocalInitialContextFactory");
final Context ctx = new InitialContext(properties);
ctx.lookup("java:....");
```

This context factory supports few more options when **you boot the container** creating a context:

Name	Description
openejb.embedded.remotable	true/false: starts embedded services
Context.SECURITY_PRINCIPAL/Context.SECURITY_CREDENTIALS	the **global** security identity for the whole container

IMPORTANT	Context.SECURITY_* shouldn't be used for runtime lookups with LocalInitialContextFactory, it would leak a security identity and make the runtime no more thread safe. This factory was deprecated starting with 7.0.2 in favor of org.apache.openejb.core.OpenEJBInitialContextFactory.

OpenEJBInitialContextFactory

This factory allows you to access local EJB and container resources.

```
Properties properties = new Properties();
properties.setProperty(Context.INITIAL_CONTEXT_FACTORY,
"org.apache.openejb.core.OpenEJBInitialContextFactory");
final Context ctx = new InitialContext(properties);
ctx.lookup("java:....");
```

RemoteInitialContextFactory

Intended to be used to contact a remote server, the org.apache.openejb.client.RemoteInitialContextFactory relies on the provider url to contact a tomee instance:

```
Properties p = new Properties();
p.put(Context.INITIAL_CONTEXT_FACTORY,
"org.apache.openejb.client.RemoteInitialContextFactory");
p.put(Context.PROVIDER_URL,
"failover:ejbd://192.168.1.20:4201,ejbd://192.168.1.30:4201");

final InitialContext remoteContext = new InitialContext(p);
ctx.lookup("java:....");
```

Contrarly to local one, the remote factory supports Context.SECURITY_* options in a thread safe manner and you can do lookups at runtime using them.

See Cluster page for more details on the options.