

Usage of SOFA 2

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1. Overview

As described in the [runtime architecture](#), the SOFA 2 runtime environment consists of several parts. To launch SOFA 2 application, all these runtime parts have to be executed first. The SOFA 2 archive (see [Download](#)) contains directory `bin`, in which launching scripts reside (there are two variants of each script: `script_name.sh` for the UNIX-like systems and `script_name.bat` for Windows systems).

2. Launching scripts

- **setenv.(sh|bat)** contains configuration variables for all other scripts. The default values are suitable for executing all runtime elements on a single machine. The meaning of each variable is described inside the script.
- **sofa-node.(sh|bat)** executes the repository, global connector manager, and dock registry - all in a single process and on a single machine. If you want to execute them separately, use the following three scripts (and do not use this one).
 - **sofa-repository.(sh|bat)** executes the repository.
 - **sofa-dockregistry.(sh|bat)** executes the dock registry. During launching the dock registry, the *rmi registry* is also launched and is used by other SOFA runtime elements.
 - **sofa-conman.(sh|bat)** executes the global connector manager.
- **sofa-dock.(sh|bat)** executes a deployment dock. As a parameter, the script takes a name of the dock.
- **sofa-launch.(sh|bat)** launches a SOFA 2 application. It takes two parameters: the name and version of the launched deployment plan.
- **sofa-shut.(sh|bat)** shuts down launched application. It takes one parameter: the component instance ID (the ID is printed by the **sofa-launch** script or, alternatively, it can be obtained by the **sofa-ps** script).
- **sofa-ps.(sh|bat)** prints out running applications/components. Without parameters, it prints out applications (i.e. top-level components) running in the SOFAnode. With a parameter (any), it prints out all components running in the SOFAnode.
- **sofa-caps.(sh|bat)** prints out capabilities of deployment docks. First parameter is the name of the deployment dock. Without parameters, it prints out capabilities of all running deployment docks in a SOFAnode.

3. Execution order

The recommended order of launching runtime entities is following:

1. repository
2. dock registry
3. global connector manager
4. deployment docks (as many as you want, each of them must have unique name)

Then you can launch applications.

4. Example

The SOFA 2 archive contains in the repository ready-to-run *LogDemo* application. Its architecture is shown on the following figure.

The repository contains two deployment plans for this application. First one executes all components in the single deployment dock with the name `nodeA` while second one distributes components over two docks with the names `nodeA` and `nodeB`.

To execute the application locally, launch the deployment dock with the name `nodeA` (after executing all other runtime elements) and then launch the application via command

```
sofa-launch. (sh|bat)
org.objectweb.dsrg.sofa.examples.logdemo.deplplan.Local
sofa.objectweb.org!0!0
```

Note:

The second parameter of the launching script is the version identifier. As it contains exclamation marks, you may need to enclose it in quotes.

To execute the application distributely, launch the deployment docks with the name `nodeA` and `nodeB`(again after executing all other runtime elements) and then launch the application via command

```
sofa-launch. (sh|bat)
org.objectweb.dsrg.sofa.examples.logdemo.deplplan.Distributed
sofa.objectweb.org!0!0
```

To stop the application, call the `sofa-shut. (sh|bat)` command with the component instance ID (printed out during launching).

The second example is a more complex version of the *LogDemo*, which architecture is shown on the following figure.

Again, there are two deployment plans prepared: first one executes all components in the single deployment dock with the name `nodeA` while second one distributes components over two docks with the names `nodeA` and `nodeB`. The application can be launched by commands:

```
sofa-launch. (sh|bat)
org.objectweb.dsrg.sofa.examples.logdemo.deplplan.ComposedLocal
sofa.objectweb.org!0!0
sofa-launch. (sh|bat)
org.objectweb.dsrg.sofa.examples.logdemo.deplplan.ComposedDistrib
sofa.objectweb.org!0!0
```