# Lightweight Session Programming in Scala (Artifact)[*]

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### Abstract

In the paper *"Lightweight Session Programming in Scala"*, we introduce a "lightweight" integration of session types in the Scala programming language, based on *(1)* a formal type-level encoding, and *(2)* a library implementation of linear I/O channels, called `lchannels`, providing a convenient API for session-based programming, and supporting both *local* and *distributed* communication. This artifact is the source code of `lchannels`, with all the examples and benchmarks discussed in the paper.

## 1 Scope

This artifact allows to repeat all examples and benchmarks presented in the companion paper. Moreover, it can be used to implement new applications — but in this case, using the latest version of `lchannels` is recommended (see Section 3).

## 2 Content

The artifact package includes:
1. the `lchannels` source code, including the examples and benchmarks discussed in the companion paper;
2. detailed instructions (provided as an `index.html` file) for building `lchannels`, running the examples and benchmarks, and navigate their source code;
3. a VirtualBox disk image containing a lightweight GNU/Linux distribution fully configured for testing our artifact. The file `Xubuntu_14.04.3-32bit.7z` contains Xubuntu 14.04 LTS, with all the dependencies and configurations described in the `index.html` file above.

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- username: `osboxes`
- password: `osboxes.org`

After logging in, inside the directory `~osboxes/artifact/`, you will find the contents described in items 1 and 2 above.

## 3    Getting the artifact

The artifact endorsed by the Artifact Evaluation Committee is available free of charge on the Dagstuhl Research Online Publication Server (DROPS). The latest version of `lchannels` is available at `http://alcestes.github.io/lchannels/`.

## 4    Tested platforms

The artifact has been tested on Ubuntu 14.04/15.10, Debian Sid (March 2015) and Mac OS X 10.10/10.11. In general, it should work on any platform running Java 8.

## 5    License

BSD 2-clause license (`https://opensource.org/licenses/BSD-2-Clause`).

## 6    MD5 sum of the artifact

f54ac784723bf884d204046c1ec332c2

## 7    Size of the artifact

894 MB