Scalability-First Pointer Analysis with Self-Tuning Context-Sensitivity (Artifact Installation Instructions)

1 Basic Requirements

To use this artifact, you need to have:

- A 64-bit Ubuntu system (version 14.04 – 16.10).
- A Python interpreter (version 2.7 – 3.0).
- A Java 1.8 distribution.

2 Installing the PA-Datalog Engine

To run Doop framework, you need to install a PA-Datalog engine for interpreting the Datalog rules used in Doop. Since we cannot re-distribute our copy of this engine to others due to the licensing issue, you need to install the engine by yourself. Below we introduce how to install and setup the engine.

Installation Firstly, please download the engine from this page:

`http://snf-705535.vm.okeanos.grnet.gr/agreement.html`

Note that to download the engine, you must accept the academic license (which will automatically pop up after you click the "Download" and "Proceed" buttons).

For each Ubuntu system, there are two files, i.e., a `.tar.gz` file and a `.deb` file, corresponding to two installation approaches. For convenience, we recommend `.deb` package installation. For example, if you use Ubuntu 16.04, then just select "Ubuntu 16.04 LTS (.deb)" and proceed.

To install the `.deb` (e.g., `pa-datalog_0.5-1xenial.deb` for Ubuntu 16.04), just run the following two commands (The first may report some missing packages as shown in Figure 1. This is expected, and these packages will be automatically installed by the second command as shown in Figure 2):

```
$ sudo dpkg -i pa-datalog_0.5-1xenial.deb
$ sudo apt-get install -f
```

Now PA-Datalog engine should be in directory `/opt/lb/pa-datalog`.

Setup To make the binaries of PA-datalog available for use in the shell, you need to:

1. Set `JAVA_HOME` to an appropriate location for Java:

```
$ export JAVA_HOME=/path/to/java-8
```

2. Source the `lb-env-bin.sh` script in your shell to set required paths:

```
$ source /opt/lb/pa-datalog/lb-env-bin.sh
```

Then the PA-Datalog engine is ready to use. You may include the above commands in your startup script such as `.bashrc`, so that you don't need to setup the engine again when you open a new shell.

Now you can start evaluating our artifact.

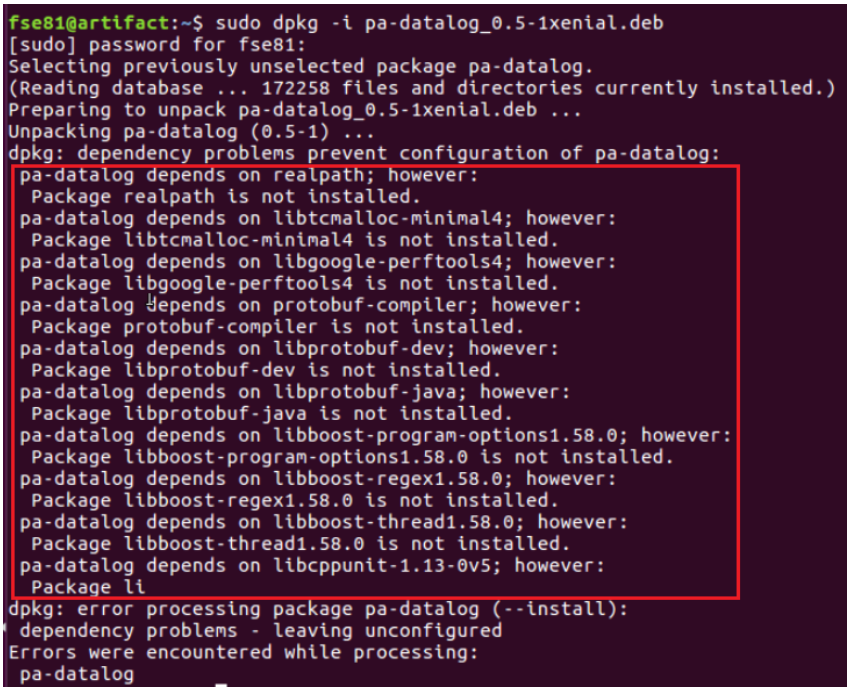

Figure 1: Missing packages

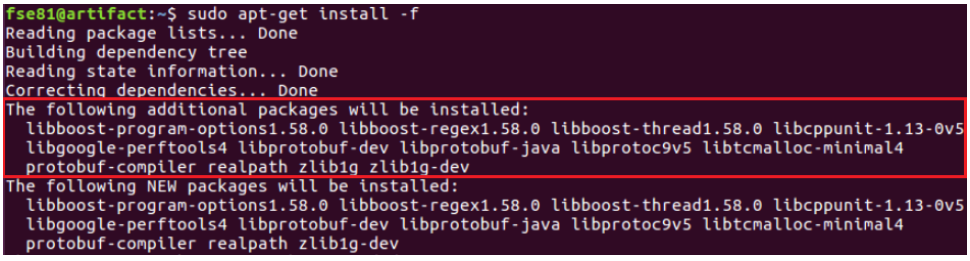

Figure 2: The missing packages will be automatically installed.