

The BOINC Wrapper

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Outline

- The Wrapper: when we need it.
- Using the Wrapper.
- An example.
- Exercise.

The Wrapper: when we need it

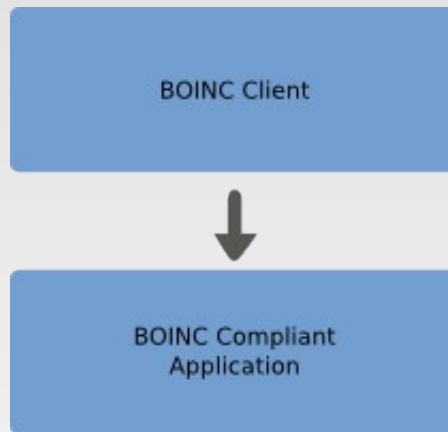
- "Standard" BOINC applications have to be compiled with BOINC Libraries.
- Due to this constraint it is not possible to run "Legacy Applications" in this way.
- The solution is to use a Wrapper.

The Wrapper



BOINC Client

The Wrapper

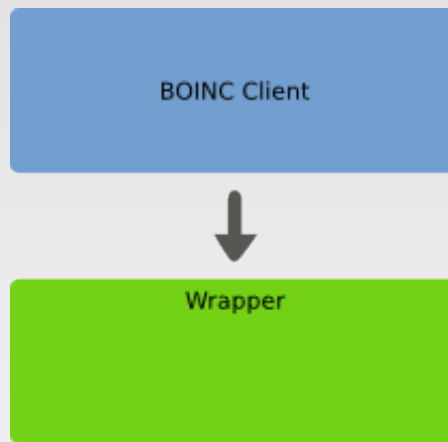


The Wrapper

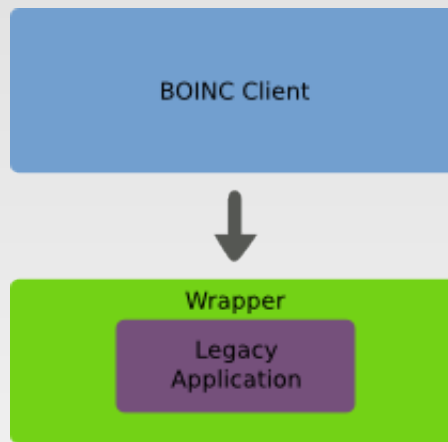


BOINC Client

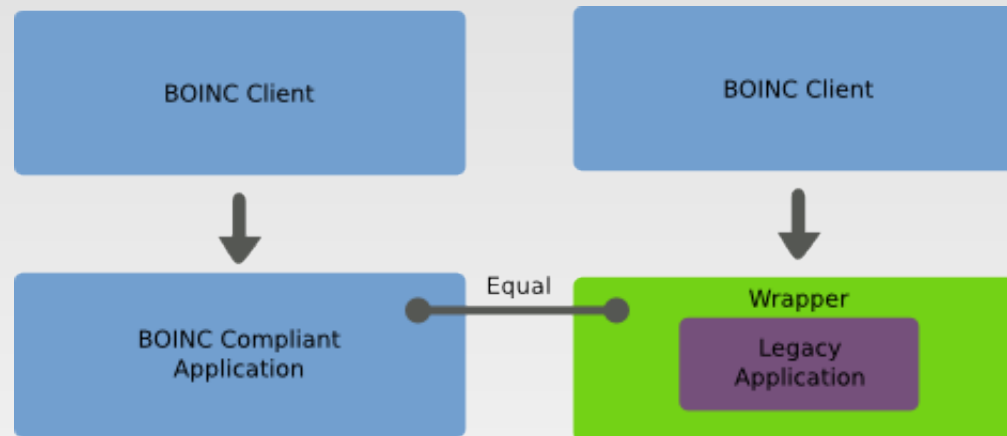
The Wrapper



The Wrapper



The Wrapper



The Wrapper

- The wrapper handles:
 - Suspend
 - Resume
 - Quit
 - Abort
 - Reporting CPU time
 - Loss of heartbeat from core client
- It does not handle:
 - Check-pointing
 - Screen saver - Graphics

An example

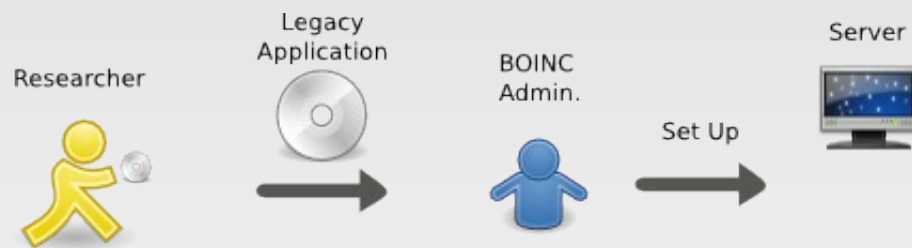
Researcher



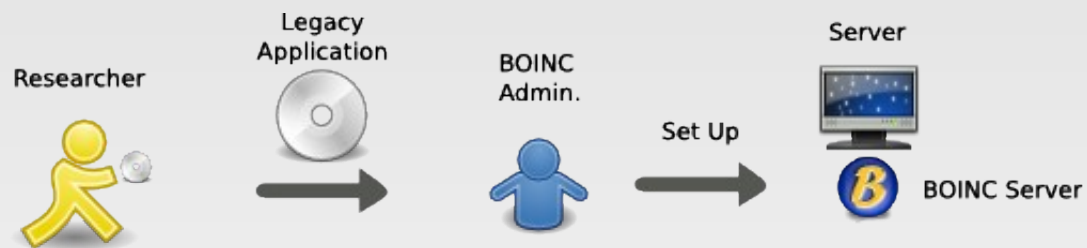
An example



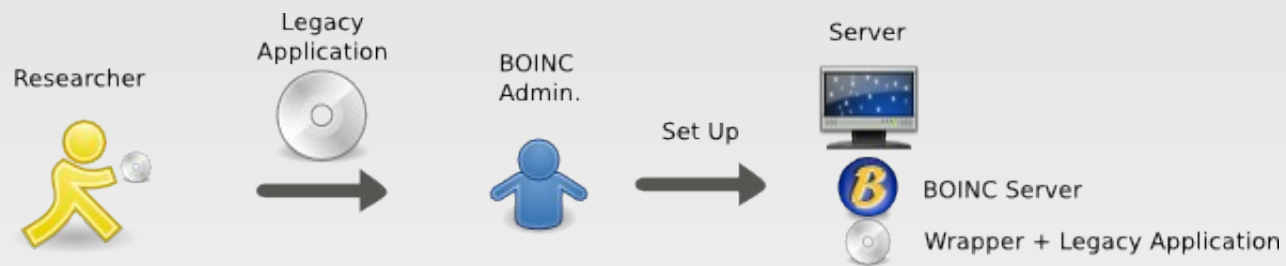
An example



An example



An example



Work Units

- We have to adapt a bit the WU for using the Wrapper.
- All Input/Output files for the Legacy Application have to be tagged with: **<copy_file/>**

Work Unit example

```
<file_info>
```

```
  <number>0</number>
```

```
</file_info>
```

```
<workunit>
```

```
  <file_ref>
```

```
    <file_number>0</file_number>
```

```
    <open_name>in</open_name>
```

```
    <copy_file/>
```

```
  </file_ref>
```

```
</workunit>
```

Result example

```
<file_info>
  <name><OUTFILE_0/></name>
  <generated_locally/>
  <upload_when_present/>
  <max_nbytes>5000000</max_nbytes>
  <url><UPLOAD_URL/></url>
</file_info>
<result>
  <file_ref>
    <file_name><OUTFILE_0/></file_name>
    <open_name>out</open_name>
    <copy_file/>
  </file_ref>
</result>
```

The Wrapper input file

```
<job_desc>
```

```
  <task>
```

```
<application>worker_5.10_windows_intelx86.exe</application>
```

```
  <stdin_filename>stdin</stdin_filename>
```

```
  <stdout_filename>stdout</stdout_filename>
```

```
  <command_line>--help</command_line>
```

```
</task>
```

```
</job_desc>
```

Exercise

- Build the wrapper and a Legacy Application for running it inside BOINC.