

Confiabilidade de Sistemas Distribuídos Dependable Distributed Systems

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Motivation

- In a system where nodes can be Byzantine, it is necessary to be able to restart the local software.
- The goal of this lab is to create a system that is able to start and stop the software running in the local node.

Goal

- Create a server with two operations (with the following suggested parameters):
 - launch(url, hash, mainclass, parameters)
 - URL: URL for obtaining the jar containing the software to run
 - Hash: hash of the jar to verify integrity
 - Mainclass: Main class to run
 - Parameters: parameters to be used in the main class
 - stop(id)
 - Id: id of the software to stop, as returned by the launch.

Suggestions

- Use Java class loaders to dynamically load code:
 - <https://docs.oracle.com/javase/8/docs/api/java/net/URLClassLoader.html>
 - <https://docs.oracle.com/javase/tutorial/deployment/jar/jarclassloader.html>
- To be able to simply stop a running software, launch the software in a new process
 - <https://docs.oracle.com/javase/8/docs/api/java/lang/Process.html>