

The R-OSGi Deployment Tool, a plugin for the Eclipse IDE, builds on top of the R-OSGi module system, which is a dynamically-loadable module for Java applications based on the OSGi standard [4, 3]. R-OSGi Deployment Tool includes a graphical plugin for visualizing deployments as well as a deployment agent that coordinates distribution of software. The deployment agent performs a static analysis to determine which OSGi bundles need to be deployed to which machines; users graphically interact with the tool to place modules on remote hosts.

R-OSGi Deployment Tool and R-OSGi are limited to Java applications built using R-OSGi bundles; furthermore, they are intended to facilitate graphical partitioning of an application to a distributed setting.

The AMOEBA operating system was a UNIX-like operating system designed to completely erase the distinction between local and remote processes [1]. However, programs must be written using the AMOEBA object system in order to gain distributed capabilities, which severely limited its appeal. The PLAN 9 operating system, by contrast, approached distributed applications in a more lightweight fashion, by designing a form of distributed IPC modeled to appear like ordinary UNIX files, but were built on top of a distributed network protocol called 9P [2]. PLAN 9 required modest rewrites of applications in the PLAN 9 dialect of C. Ironically, many of the requirements of PLAN 9 C are now considered good programming practices in modern C. Since PLAN 9, most operating systems have gained network capabilities, for example, the secure shell protocol [5], providing for a similar kind of file- and pipe-based IPC in ordinary operating systems.

LOCUTUS has no inherent language limitations, and it is intended to automatically distribute an application wholesale to a remote host without user intervention or manual partitioning.

## References

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