

Eclipse BlueChi

Multi-node service controller for Automotive and Edge

Eclipse BlueChi is a systemd service controller intended for use in multi-node environments with a predefined number of nodes. It is designed to be deterministic, lightweight, and fast, as well as certifiable as functionally safe so it can be used in highly regulated ecosystems.



systemd is a well-tested init system and service manager, which is used on a wide range of Linux distributions, such as Fedora and Ubuntu. It provides a collection of tools to manage local services.



Eclipse BlueChi adds a thin layer on top of systemd to enable the management of services remotely. It directly integrates with the systemd D-Bus API to leverage features of systemd, such as controlling containerized applications.

Eclipse BlueChi consists of three core components:

- **bluechi-controller**
Runs on the primary node and controls all connected agents. It provides a D-Bus API that higher level management systems can integrate with.
- **bluechi-agent**
Runs on each managed node, providing a communication layer between bluechi-controller and the local systemd.
- **bluechictl**
CLI application for manual testing, debugging, and management of services.

