



Reference Implementation of an Autonomic Manager

motivation

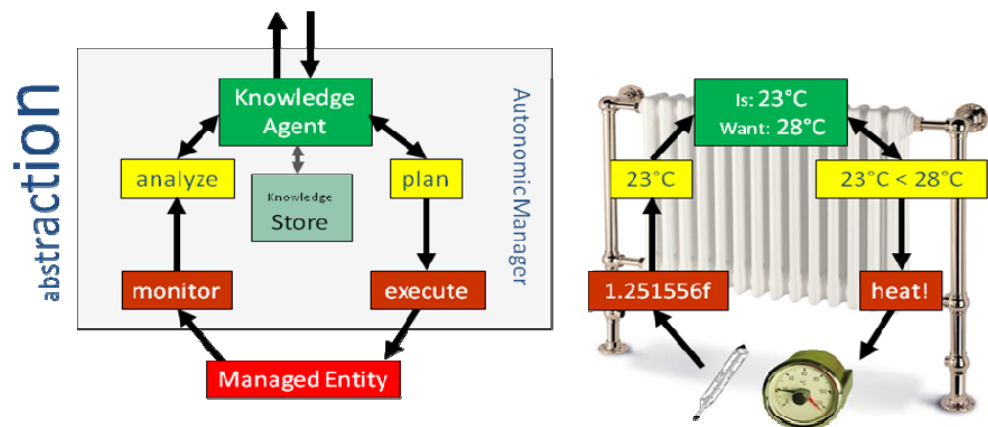
We are currently developing an **Autonomous Control and Management Platform (ACMP)** with a major focus on home networking. Spanning over all nodes inside a network, the platform creates an information overlay that allows **distributed knowledge-based management**.

All devices connected to the platform can be remotely controlled via their abstraction (model) inside the **Knowledge Plane (KP)** overlay. Through the abstract model it is possible to write high level services that are able to provide functionality (e.g. switching off all devices inside an area of the network without knowing the specific devices when writing the service).

Devices connected to the ACMP run an Autonomic Manager (AM). The AM takes care of maintaining the node by reflecting model changes to the Managed Entity for instance.

work description

In this work a reference implementation of an Autonomic Manager should be provided. The reference implementation will be the base for the integration of devices into the ACMP. The structure of an AM follows the so-called MAPE cycle. It consists of a Monitoring module, an Analyzer module, a Planning module and an Execution module. These modules should be implemented. The Knowledge Agent and the Knowledge Store exist already as components of the ACMP and have to be integrated.



Goal of the work is a reference implementation for an Autonomic Manager that can be distributed in form of a development kit to enable developers to write drivers for hard and software components that should be connected to the ACMP.

As one example for such a device a standard PC as well as software running on it should be connected to the platform using the new development kit.

