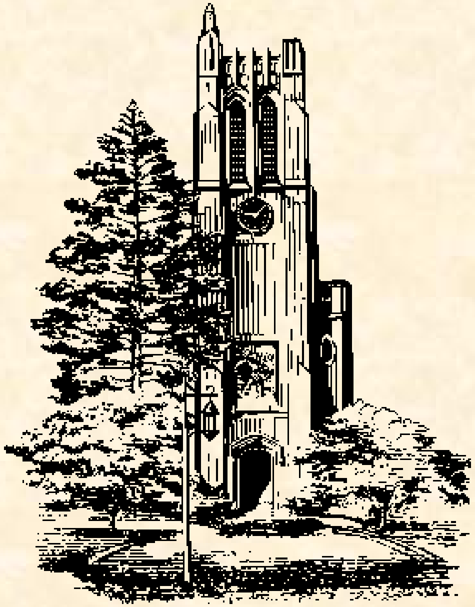
MICHIGAN STATE UNIVERSITY

Technical Specification / Schedule Motorola Autonomics Framework



Team 10: Motorola

CSE 498, Collaborative Design

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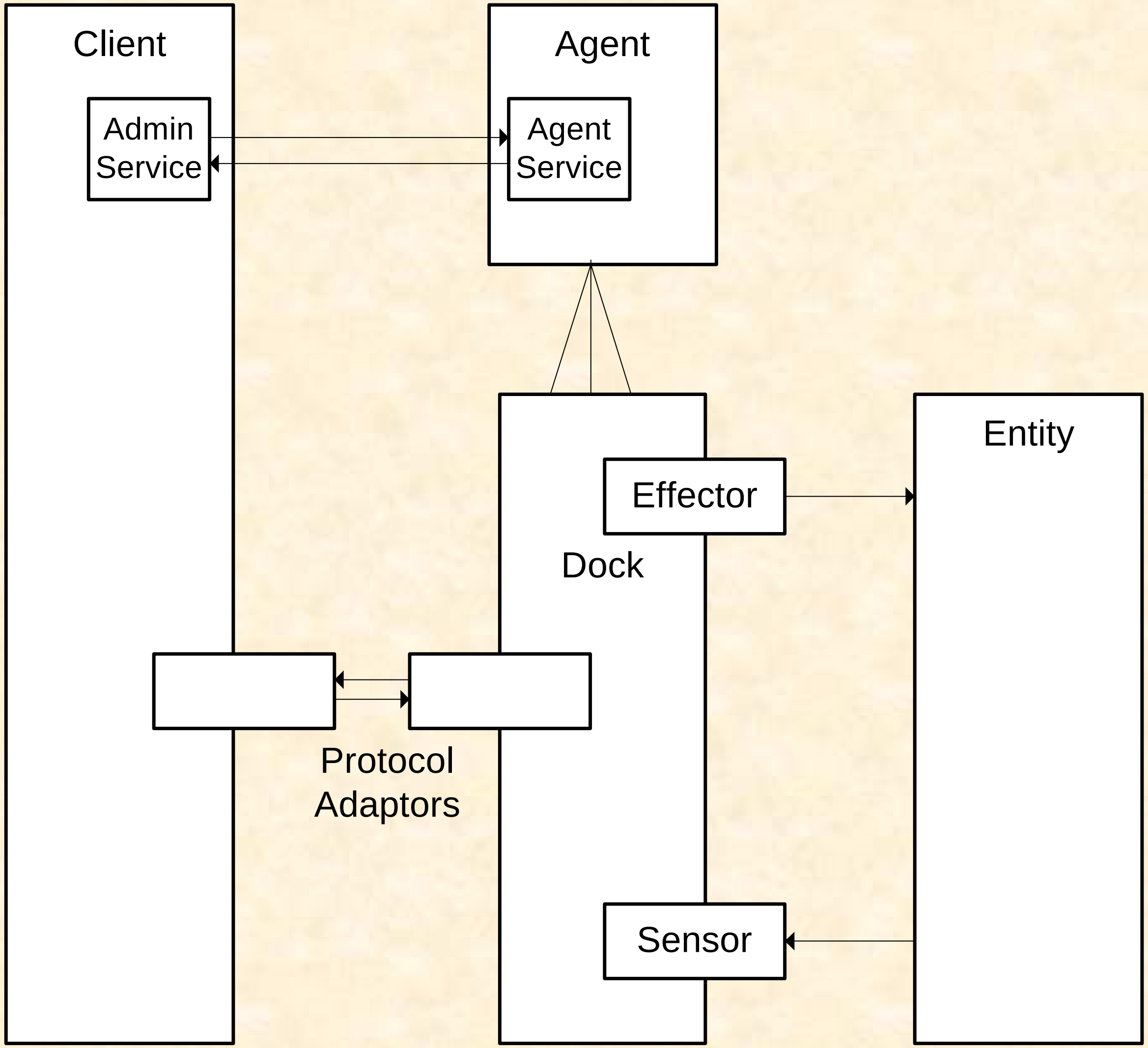
Project Overview

- Agent framework for managing network entities, from servers to individual ports on a switch
- Clients can send commands to and receive events from any number of entities
- Device-independent message format used for communication with clients; framework performs the translation
- Class loader allows support for new client and entity protocols to be added without restarting the application

Architecture Components

- Hardware Platforms
  - Client and agent programs should be able to run on any server
  - First entity will be a Cisco Catalyst 2950 switch
  - Support for other entities could be added
- Software Platforms / Technologies
  - Framework implemented in Java
  - Agent managed through a SOAP interface (implemented with JAX-WS)
  - Client may send and receive messages over most any protocol; will be implementing at least CORBA
  - Entity communication uses SNMP and/or CLI

Architecture Illustrated



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Architecture Risks

- Solidifying framework design
  - Hopefully near-final at this point
- Message format
  - Client contact has already begun work on a model, but we have yet to go over it together
- Communication with client application
  - Current hearsay is that CORBA is difficult to use
- Communication with entities
  - Travis only group member with SNMP experience
  - No experience with Cisco 2950, though extensive documentation does appear to be available
- Class loading

Project Schedule

1. Skeleton classes
   a) Goal: Tech spec class diagram, in code form
   b) Date: January 31
2. Stub Implementation
   a) Goal: Program working / communicating; no functionality
   b) Date: February 5
3. Prototype Demonstration
   a) Goal: Working prototype for simple scenarios
   b) Date: February 19
4. Simple Scenarios Testing
   a) Goal: Thorough testing of prototype’s functionality
   b) Date: February 26

Project Schedule

5. Complete Scenario Implementation
   a) Goal: Full functionality for basic protocols
   b) Date: March 12
6. Complete Scenario Testing
   a) Goal: Thorough testing of functionality
   b) Date: March 17
7. Final Prototype
   a) Goal: Complete prototype implementation / testing
   b) Date: March 19
8. Extend Functionality
   a) Goal: Add support for any additional protocols
   b) Date: March 26

Project Schedule

9. Extended Functionality Testing
   a) Goal: Thorough testing for additional protocols completed
   b) Date: April 2
10. Final Demonstration
   a) Goal: All aspects of demonstration completed
   b) Date: April 9
11. Final Testing
   a) Goal: All testing has been completed
   b) Date: April 16
12. Final Presentation
   a) Goal: All aspects of project / presentation completed
   b) Date: April 23

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