The purpose of this thesis was to analyze the problem of resource load balancing in virtualization clusters. Another aim was to implement a pilot version of resource load balancer for the VMware vSphere Standard-based virtualization cluster. The thesis also inspected available commercial and open source resource load balancers and examined their usability and effectiveness.
While designing the custom solution, a modification of the greedy algorithm has been chosen to be used to determine which virtual machines should be migrated and to select their target hosts. Furthermore, experiments have been conducted to determine some parameters for the algorithm.
Finally, it was experimentally verified that the implemented solution can be applied to effectively balance virtualization server workloads by live migrating virtual machines running on these hosts.