AntCloud

Version 1.0

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November 3, 2023

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1 Version table

Date	Version	Notes
1/11/2023	1.0	• Created GitHub Repository • Added first version of documentation • Created rudimentary version of a client and workstation
3/11/2023	1.1	• Modified documentation • Modified the client and workstation code • Added the server • Added a Makefile that automates compilation

2 Introduction

AntCloud is a distributed processing application that enables users to execute their code on a remote server with high-performance computing resources. AntCloud is designed for users who have limited processing power on their local PC and want to leverage the benefits of cloud computing and distributed processing without incurring high costs. By using AntCloud, users can easily upload their code, a suitable server will be selected, and run their code in a matter of minutes. AntCloud is a convenient and affordable solution for users who need to run complex and intensive code on a regular basis.

3 Requirements

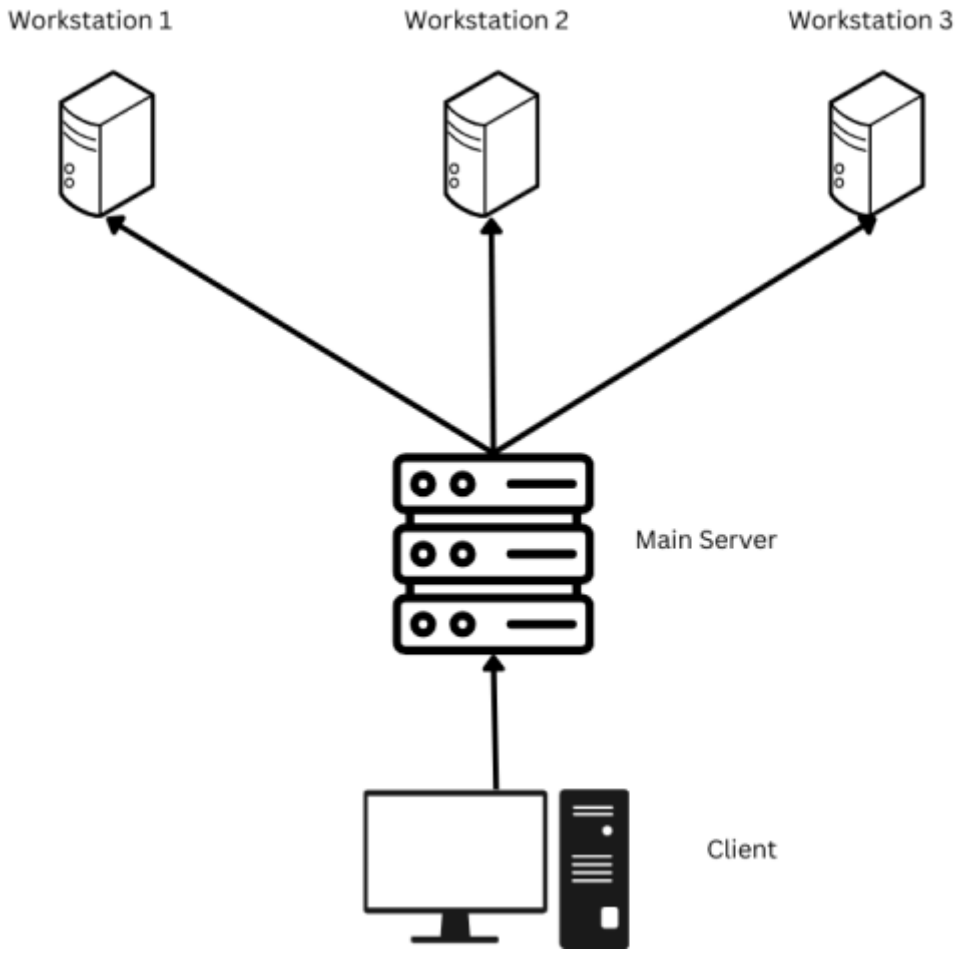
3.1 Functional Requirements

- Server receives executable and parameters from user
- Run executable with given parameters whenever a worker is available
- Return result to the user after the executable is terminated

3.2 Non Functional Requirements

- Server must support multiple users and workers
- The executable is given in base64 encoding

4 Architecture



This application follows a master-slave architecture that consists of a central main node(the master) and multiple workstations(the slaves). In this architecture, the master is responsible for coordinating and managing the overall system, while the slave nodes perform specific tasks or computations assigned by the master.