

## ABSTRACT

A Case Study on the Implementation and Testing of a Linux Cluster Environment in a University  
Department

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Clustering are technologies that allow multiple computers to work together to solve common computing problems. In the Department of Mathematics and Computer Science we have many computationally intensive problems which take some time to complete. The power of clustering allows tasks that may take a considerable amount of time to be done in a fraction of that time. This can aid greatly when time critical output is needed. We also have cases in the department where old machines are written off and new ones acquired. These old machines can also be used in solving these problems.

There are numerous implementations and applications of these types of clusters. But there are no official or even unofficial implementations in the Department of Mathematics and Computer Science of The University of the West Indies, St. Augustine Campus.

This report will not only investigate and document an implementation of such a cluster in the mentioned department, but also make use of old machines for their processing power. Various levels of tests will be performed to test the level of feasibility that can be applied in the department to help in some aspects of its research. At the end of the investigation, a conclusion may be drawn whether this can be exploited in a larger scale in the department as well as across multiple departments.

Keywords: Naresh Rienzie Seegobin; Clustering; Director based Cluster