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РОЗРОБКА ІНФОРМАЦІЙНОЇ СИСТЕМИ НА ОСНОВІ ВИСОКОПРОДУКТИВНОГО ОБЧИСЛЮВАЛЬНОГО КЛАСТЕРА

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INFORMATION SYSTEM DEVELOPMENT ON THE BASE OF HIGH PERFORMANCE COMPUTING CLUSTER

A computer cluster is a group of loosely coupled computers that work together closely so that in many respects they can be viewed as though they are a single computer. The components of a cluster are commonly, but not always, connected to each other through fast local area networks. Clusters are usually deployed to improve performance and/or availability over that provided by a single computer, while typically being much more cost-effective than single computers of comparable speed or availability.

High-performance computing nowadays is now within reach of a lot of businesses by clustering industry-standard servers.

The aim of the project is to build a system for high performance cluster in both Windows and Linux platforms. Windows Computer Cluster Server 2003 is a high-performance computing solution that utilizes clustered commodity x64 servers that are built with a combination of the Microsoft Windows Server 2003 Computer Cluster Edition OS and the Microsoft Computer Cluster Pack. Linux is a highly stable operating system that is being used for many high availability tasks, like web and database servers. Also Linux clusters is built to serve as high performance computations facilities.

Clusters ranges from a few nodes to hundreds of nodes. Years ago, wiring, monitoring, configuring, provisioning, and managing these nodes and providing appropriate, secure user access was a complex undertaking, often requiring dedicated support and administration resources. Cluster is built using Windows and Linux.

Microsoft Windows Compute Cluster Server 2003 makes the installation, configuration, and management very easy, reducing the cost of compute clusters and making them accessible to a broader audience. Windows Compute Cluster Server 2003 is a high-performance computing solution that uses clustered commodity architecture 64 servers that are built with a combination of the Microsoft Windows Server 2003 Compute Cluster Edition operating system and the Microsoft Compute Cluster Pack.

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During the logical design phase I will be describing the inputs (sources), out puts (destinations), databases (data stores) and procedures (data flows) all in a format that meets the uses requirements. I will also specifies the user needs and at a level that virtually determines the information flow in and out of the system and the data resources. The logical design will be done through data flow diagrams and database design.