i-scream
The future is bright; the future is blue.

Specifications

Original Problem Domain

John Cinnamond (jc@ukc.ac.uk) provided a suggestion for a third year project.
This is the original description of the problem domain.

Revision History

07/03/01	Initial creation				
		Committed by:	pjm2	Verified by:	tdb1
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				Date:	

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Introduction

John Cinnamond (jc@ukc.ac.uk) provided a suggestion for a third year project.
This is the original description of the problem domain.

Problem domain

The Computer Science department has a number of different machines running a variety of different operating systems. One of the tasks of the systems administrators is to make sure that the machines don't run out of resources. This involves watching processor loads, available disk space, swap space, etc.

More details

It isn't practical to monitor a large number of machines by logging on and running commands such as 'uptime' on the unix machines, or by using performance monitor for NT servers. Thus this project is to write monitoring software for each platform supported, which reports resource usage back to one centralized location. System Administrators would then be able to monitor all machines from this centralised location.

Once this basic functionality is implemented it could usefully be expanded to include logging of resource usage to identify long-term trends/problems, alerter services that can directly contact sysadmins (or even the general public) to bring attention to problem areas. Ideally it should be possible to run multiple instances of the reporting tool (with all instances being updated in real-time) and to be able to run the reporting tool as both a standalone application and embedded in a web page.

This project will require you to write code for the Unix and Win32 APIs using C and knowledge of how the underlying operating systems manage resources. It will also require some network/distributed systems code and a GUI front end for the reporting tool. It is important for students undertaking this project to understand the importance of writing efficient and small code as the end product will really be most useful when machines start to run out of processing power/memory/disk.

Technical support

This project idea was put forward by John Cinnamond (jc@ukc.ac.uk). He will provide technical support for the project.