product content data from business customers and managers of the enterprise.

An existing SAP Hybris ecommerce platform was used. It is used to store different kind of content data.

The system was developed in Java programming language with the help of Jackrabbit OSGi Framework. Java code was used by the Adobe Experience Manager content management system. Apache Maven was chosen to build the project.

The application architecture in accordance with OSGi Framework where there is a defined for building an application from components that can dynamically link different modules. The composition of the components can change during the execution of the application. Interaction between components is carried out using services that are registered in the service register.

The developed service is a part of much bigger application, and it uses the code that was writing before. Service contains interfaces, annotation classes, utility classes, uses different product models and page templates.

The user interface consists of product page with lists of product benefits, technologies or press reviews, detailed information about the production. And product listing pages with list of products.

To increase customer focus, it is possible display reports in the form of graphs to analyze the popularity of products in any format.

Special attention was paid to the functionality of the project.

The project was successfully accepted and is being used by the customer.

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FUNCTIONALITY OF MONITORING SYSTEM FOR ENTERPRISE LAN WORKSTATIONS

At the beginning of the development of information technologies, simple solutions were used: all systems were simple, there was enough team of professionals to keep the system in working order, there were few changing components, so there was no need for monitoring. Nowadays, the implementation of a monitoring system is a common process for a sufficiently developed infrastructure.

The introduction of an automated monitoring system and control of the information infrastructure can improve the quality of its functioning by

quickly identifying and eliminating failures and malfunctions, as well as preventing their occurrence in the future, primarily for the most critical services for the company's business.

The stability of the computer as a whole, as well as the durability of individual components, directly depends on how much its characteristics are within the normal range. After all, the deviation of one characteristic can lead to changes in others. For example, the operating temperature, in turn, is associated with a set of characteristics and properties of devices: their power consumption, heat generation, operating voltage, frequency. And an increase in frequency causes an increase in heat generation.

So, monitoring allows you to monitor in real time through log files and graphs:

1 Temperatures (CPU, motherboard, GPU, HDD, power supply);

2 Power supply voltage (motherboard, RAM, GPU);

3 Rotation speed of fans and coolers (CPU, GPU, Aux, case).

Monitoring can be hardware and software. But any software monitoring still uses the parameters of the state of the hardware, therefore, it is software and hardware. The software allows displaying the state of monitoring values by reading the state registers of the corresponding monitoring microcircuits. In turn, monitoring microcircuits receive information from various sensors. Thus, the software cannot display information without a system of sensors and a monitoring microcircuit, and hardware, in turn, cannot display the state without software.

There are a great variety of sensors, but we are primarily interested in temperature sensors, tachometric and constant voltage sources. Thermal resistors, thermal diodes, thermal transistors can act as thermal sensors. Depending on which node of the system we observe (processor, bridges, hard drive, graphics chip) and the sensors used in it, the accuracy of the readings can vary greatly. That is, a lot also depends on the capabilities of the monitoring microcircuit - both accuracy and the number of simultaneously monitored parameters, the number of connected signal sources.

Nowadays, there is no single monitoring system that would suit everyone. There are many solutions on the market, but they are not suitable for some reason. Therefore, it is necessary to form a set of requirements for a computer monitoring system. In other words, the solution to the monitoring problem is to develop and research an algorithm and its software implementation to study the key characteristics of computer systems.

To solve these tasks, the monitoring system must meet certain requirements:

1 Scalability: the software package should run on clusters with a wide range of processor numbers.

2 Portability: the software package should have a minimum installation and configuration time. And also, minimally depend on the operating system.

3 Extensibility: the software package should be able to track the characteristics and parameters that are not provided in the standard package, but reflect certain features of the work.

4 Versatility: data must be collected from physically distributed components of the system.

5 Distributed system: it should be possible to replace key components of the software package with a custom solution without losing functionality.

6 Authorization: The system should ignore data from unauthorized computers, and also not allow other users to view your data.

7 Efficiency: the operation of the software package should not have a significant impact on the operation of the system in general and user programs in particular. Supporting the operation of auxiliary subsystems on computing nodes should not take more than 5 % of the processor time, and the transfer of additional data over the network should not exceed 1 % of the total traffic.

The implementation of these requirements will provide monitoring and accumulation of computer network data with a convenient and practical solution that can be easily scaled.

The developed monitoring system meets all the above requirements. It allows you to connect many computers for monitoring, regardless of their configuration, is portable and quickly installed, is divided into three main components that can be replaced by a custom solution if the standard solution does not meet some company rules and has a configurable data collection time, which allows you to flexibly configure data collection for each computer separately. All data can be stored in a database on your own server, without transferring data to another network. If the internal network is properly configured, this will reduce the risk of data leakage or interception.

The priorities for further development of the software package should be the development of autonomous notification, the development of algorithms for analyzing the overall performance, and the provision of reports on the results.