Abstract

In this study applications for "Monitoring in Libraries" used in ITU Mustafa Khan Library are presented. Nagios open source monitoring application is used in this project. The subject of "Monitoring in Libraries" covers controlling the network objects (devices, servers and services) located inside and outside the library, installation, configurations, stages and reporting of monitoring are described in detail below this work.

Library Profile

Istanbul Technical University Mustafa Khan Library is one of the largest libraries in its region. The Library has a total collection about 500,000 printed volumes including books, textbooks, standards and theses publications. Addition to these there are more than 175,000 ebooks and 66,000 electronic subscriptions. Library has over 25,000 patrons both faculty members and students. The Library is open 7274 hours with all sections with the 99 staff in all 6 branch and this is the first and only library work at this level in Turkey. There are 61 OPAC computers for patron usage.

Objectives and Challenges

Library needed an integrated, centralized and scalable management tool to manage the whole IT infrastructure as a whole point of view. The solution is needed to be easy to set up, configure and easy to maintain. There wasn't any similar work used in libraries to control whole network objects. System must check library's network accessible objects like library servers, routers, opacs but the main difficulty is to check online resources located anywhere in the world.

- Checking accessibility of every online resources that library has and inform library user in one single interface.
- Controlling and monitoring of OPAC usage.
- Controlling of Library servers.

Solution and Results

To solve Library's monitoring challenge Nagios was selected and introduced as a monitoring solution because of its flexibility to incorporate and aggregate a wide range of monitoring services (2). IT Department decided to use Nagios coming with FAN Distribution (Fully Automated Nagios) (3). The purpose of using FAN is to provide a quick and easy installation which includes the most-used tools in the Nagios community. It is very easy to install. A large number of tools are also being distributed, which makes the implementation of an efficient monitoring platform much easier. FAN coming with Centris is very useful to configure Nagios.

Monitoring

While monitored network objects are shown on graphics both on Nagios screen or add-on applications like Nagios. These examples taken from Nagios:

- OPAC: OPAC computers instant snapshot.
- Database Map: Database servers instant snapshot.

Reporting

As shown in figures different text and graphical reports are created for every monitored object.

Conclusion

Seamless and easy installation has been made using FAN Distribution. All applications located in this distribution are worked smoothly and successfully. System shows the necessary warnings and sending email alerts according to the configuration. In summary the following similar are being constructed and studied began to be made in accordance with deficiencies.

- The Nagios Configuration has been done with extremely simplified operations using Centris comes with FAN distribution.
- Windows 7 operating system was using in OPACs, for this reason initially it did not respond ping request. All OPAC settings has been changed to respond ping request and its working properly.
- Monitoring the local devices and servers are successful.
- After starting to serve 7/24 hours service, determining the status of opac, if anybody log in or not, has gained more importance rather than on off condition.
- Some databases are making platforms changes. Monitoring configurations must change according to new database address.