

Lab 2.5.3 Investigating Network Monitoring Software

Objective

- Describe how network monitoring tools can be used to page or send email to on-call technicians.

Expected Results and Success Criteria

Before starting this lab, read through the tasks that you are expected to perform. What do you expect the result of performing these tasks will be?

What benefits are gained from network support technicians understanding what network monitoring tools are available?

What problems could arise if network problems are not immediately detected and acted upon by technical or network support staff?

Background / Preparation

FilmCompany is an expanding small advertising company moving into interactive advertising media, including video presentations. This company has just been awarded a large video support contract by the StadiumCompany. With this new contract, FilmCompany expects to see their business grow approximately 70 percent.

To facilitate this growth, the FilmCompany has decided to significantly upgrade its data network. In this lab, you have the role of network design consultant. Your job is to develop network design and project documents for the FilmCompany that will meet the requirements of this upgrade.

After the network is upgraded, the FilmCompany personnel will manage the network to ensure that it is performing to the design specifications outlined in the Prepare and Plan phases.

In this lab research the possible range of networking utility programs that use SNMP to monitor network performance and notify support staff when an out-of-limits condition is detected.

Step 1: SNMP overview

Simple Network Management Protocol is a common network management protocol. The protocol enables network administrators to gather data about the network and corresponding devices. SNMP management system software is available in tools such as CiscoWorks. SNMP management agent software is often embedded in operating systems on servers, routers, and switches.

SNMP has four main components:

- Management station
- Management agents
- Management Information Base (MIB)
- Network management protocol

Descriptions of SNMP are available at:

http://www.cisco.com/univercd/cc/td/doc/cisintwk/ito_doc/snmp.htm

<http://www.protocols.com/pbook/tcpip9.htm#SNMP>

As part of a network management system, SNMP tools can respond to network errors or failures in several ways. Generally, when a network fault occurs, or when predefined thresholds are met; the SNMP tools can react by:

- Sending an alert on the network
- Sending a message to a pager
- Sending an email to an administrator

The FilmCompany is required to maintain a specified level of network service to meet its StadiumCompany contract obligations. They need to purchase network management software that enables them to monitor and manage the new upgraded network.

Step 2: Search for SNMP monitoring programs

- Using a computer with Internet access, use a web browser to search for examples of SNMP monitoring programs. Use search terms such as:
 - SNMP reporting
 - SNMP notification
 - SNMP monitoring
- List other appropriate search terms.

- Note and compare the features of a number of the monitoring programs found.

Name: _____ Website: _____

Key features: _____

Name: _____ Website: _____

Key features: _____

Name: _____ Website: _____

Key features: _____

Name: _____ Website: _____

Key features: _____

- d. Select a program that would be suitable for the FilmCompany network and give reasons for your selection. Discuss your choice of program with other students.

Program: _____ Website: _____

Reasons: _____

Step 3: Example SNMP program

An example SNMP monitoring program is Plixer Denika v7.

- a. Go to the website for this program at <http://www.plixer.com/products/denika.php>.
b. List the type of reports that this program can generate.

- c. Read the details for each type of report. Select the report type that would be most applicable to ensure a problem with the performance of the link carrying real time video data from the StadiumCompany to FilmCompany was addressed as soon as possible. Summarize the features of this reporting provided by this program.

Step 4: Reflection

Consider and discuss the organizational or business support necessary to make best use of network monitoring programs with event-triggered notification features.
