

10.4.10 Lab – Research Network Monitoring Software (Answers)

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Lab – Research Network Monitoring Software (Instructor Version)

Objectives

- **Part 1: Survey Your Understanding of Network Monitoring**
- **Part 2: Research Network Monitoring Tools**
- **Part 3: Select a Network Monitoring Tool**

Background / Scenario

Network monitoring is needed for any sized network. Proactively monitoring the network infrastructure can assist network administrators with their day-to-day duties. The wide variety of networking tools available vary in cost, depending on the features, number of network locations and number of nodes supported.

In this lab, you will conduct research on available network monitoring software. You will gather information on software products and features of those products. You will investigate one product in greater detail and list some of the key features available.

Required Resources

PC with internet access

Instructions

Part 1: Survey Your Understanding of Network Monitoring

Instructor Note: In Part 1, the instructor may wish to lead a discussion with students on their understanding of network monitoring and how network administrators use it. This lab may be assigned as homework.

Describe network monitoring as you understand it. Give an example of how it might be used in a production network.

Network monitoring is done using software, typically a tool or set of tools that aid network administrators in troubleshooting, monitoring, and modifying devices within their network. Reports, performance graphs, hardware inventory management, software inventory

management, network mapping of topologies, generation of alerts through email, and/or texts to a network administrator can be part of the software tool. A network administrator may decide to set up an email alert when packet loss on a router exceeds a certain limit.

Part 2: Research Network Monitoring Tools

Step 1: Research and find three network monitoring tools.

List the three tools that you found.

Answers will vary. Solar Winds, PRTG, Nagios, Cacti, and OpManager are some examples.

Step 2: Complete the following form for the network monitoring tools selected.

Vendor	Product Name	Features
Solar Winds: www.solarwinds.com	Network Performance Monitor	Performance monitoring, automated network device discovery, network alerting, multi-vendor device support
Paessler: www.paessler.com	PRTG	Logging, bandwidth monitoring, packet sniffing, support for NetFlow Offers both a free version which is limited to 100 monitored interfaces and a paid version which is sold in increments of 500 monitored
Nagios: www.nagios.org	Nagios XI	Real-time event monitoring, performance and capacity planning, configuration wizards, user-specific notification preferences
Cacti: www.cacti.net	Cacti	Open Source product that maintains many of the same features and adds a database to store the logs as opposed to the text logs used by the popular predecessor, MRTG.

Vendor	Product Name	Features
ManageEngine: https://www.manageengine.com/network-monitoring/	OpManager	Paid product based on the number of sensors. OpManage touts the ability to monitor both physical and virtual environments including VMWare, Xen, Hyper-V among others.

Part 3: Select a Network Monitoring Tool

Step 1: Select one or more monitoring tools from your research.

From your research, identify one or more tools you would choose for monitoring your network. List the tools and explain your reasons for choosing them, including specific features that you consider important.

Answers will vary greatly. Many of the commercial tools offer 30-day free trials. PRTG is free for up to 100 network sensors. Ease of use of the product can be a big factor when selecting tools. Multi-vendor support is important as well.

Step 2: Investigate the PRTG network monitoring tool.

Search the internet for the terms Paessler and PRTG, and look for a feature list. Give examples of some of the features that you found for PRTG in the space provided below.

Answers will vary. PRTG has comprehensive network monitoring with support for more than 170 sensor types. It also has flexible alerting including: Email, syslog, pager, alarm sound files and multiple condition alerts. Remote network monitoring, network maps and customizable web interfaces are available as well.

Reflection Question

Based on your research, what conclusions have you reached regarding network monitoring software?

Answers will vary. Based on the sheer number of products available, choosing the right product is crucial. 30-day trial versions can be nice as they allow the network administrator to work with a product before buying it. There will be a learning curve to using the product, with whichever one is chosen.

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