SolarWinds Certified Professional

Exam Preparation Guide

Introduction

The SolarWinds Certified Professional (SCP) exam is designed to test your knowledge of general networking management topics and how to utilize SolarWinds Network Performance Monitor (NPM) in a real-world environment. Upon successfully passing the exam, you will receive an industry-standard technology certification, as well as the special status of SCP in the SolarWinds online community.

This guide is designed to provide an overview of the exam, recommended study resources, and sample questions to assist you in preparing for the exam.

We encourage you to register for the exam, if you have done so already. If you have any questions or need assistance, you can contact us via email.

Helpful Links

SolarWinds Official SCP Site »

SolarWinds thwack Community Forum »

Introduction to the SCP Program (Video) »

Exam Sections

Network Management Fundamentals

Objectives

- Use and explain network management protocols (e.g. SNMP, SNMP Traps, Syslog, ICMP, NetFlow, etc.)
- Leverage MIBs, OIDs, and WMI performance counters to diagnose and troubleshoot network problems

Study Resources

📄 Learning Center »

▶ Video: Network Management Fundamentals »

▶ Video: Introduction to Network Management Protocols »

▶ Video: Understanding MIBs, OIDs and Performance Counters

Sample Questions

1. A network engineer has been asked to monitor an Object Identifier (OID) using a custom poller. The custom poller does not seem to be working, so the engineer takes a packet capture from the router in question. To best filter the capture data and determine if the router is sending information about that OID, what would the engineer filter on?

   (A) destination IP address of the network management system (NMS) and port 162

   (B) destination IP address of the router and port 161

   (C) destination IP address of the network management system (NMS) and port 161

   (D) destination IP address of the router and port 162

2. When is NetFlow data exported from a router to a NetFlow collector?

   (A) when the router is queried by the NetFlow collector

   (B) whenever the router configuration is changed

   (C) when ten or more conversations have started

   (D) when a TCP conversation is finished

3. While attempting to monitor a Windows 2003 Server using WMI, a network management system is unable to pull the requested values from the server. Packet traces reveal that the requests are making it to and from the server. What is the most likely cause of the problem?

   (A) firewall rules

   (B) Windows updates

   (C) WMI versioning

   (D) Windows permissions

4. Your network management system (NMS) leverages WMI to query Windows servers for status. Each of the servers is a part of the same Active Directory domain and utilizes the same credentials for login and authorization. Overnight, one of the servers stops responding to queries from the NMS. A quick check reveals that the server is otherwise running normally. What should you check or verify next?

   (A) The SNMP service is running on the server.

   (B) The server has all available Windows updates installed.

   (C) The WMI service is running on the server.

   (D) The WMI user has read permissions allowed.

Network Management Planning

Objectives

- Translate business requirements into monitoring needs, thresholds, and SolarWinds NPM configurations

- Design a reporting system that meets the needs of the various stakeholders

- Determine monitoring scope and impact on the network

- Determine the impact of network topology on monitoring

Study Resources

- Network Management Planning »
- Video: Network Management Planning »

Sample Questions

1. A managed service provider (MSP) is planning to deploy a network management system (NMS) to monitor multiple customer networks. The MSP must choose between a centralized or distributed management architecture. What are the two most important factors to consider? (Choose two.)

   (A) available bandwidth between the MSP and customers

   (B) total number of devices to be managed

   (C) choice of SNMP version for polling

   (D) overlapping IP address space between customers

   (E) choice of SSL versus VPN tunnel for communication

2. A switch has started to show recent CPU spikes and buffer misses. No users have complained. You are able to telnet to the device, but the device has stopped responding to SNMP. What is the most likely cause?

   (A) There is an SNMP-based Denial of Service (DOS) attack on a server plugged into the switch.

   (B) SNMP has been manually disabled.

   (C) The switch is getting overloaded and has de-prioritized SNMP responses.

   (D) There is an IP address conflict on the switch.

3. Which list of protocols is in order from lowest impact on network bandwidth to highest impact on network bandwidth?

   (A) SNMP, ICMP, NetFlow, WMI

   (B) NetFlow, ICMP, WMI, SNMP

   (C) ICMP, SNMP, WMI, NetFlow

   (D) SNMP, ICMP, WMI, NetFlow

Network Management Operations

Objectives

- Enable devices for network management
- Determine future capacity requirements
- Define, monitor, and report on SLAs

Study Resources

▢ Network Management Operations »

▶ Video: Network Management Operations »

Sample Questions

1. Which type of Syslog message indicates the lowest severity level?

   (A) alerts
   (B) critical
   (C) debugging
   (D) errors
   (E) informational
   (F) notifications

2. Which protocol is the most secure for establishing remote terminal access to a system?

   (A) Telnet
   (B) SNMPv2
   (C) SSHv2
   (D) SNMPv3

3. Which aspect of network monitoring typically causes a network management system (NMS) database to grow quickly?

   (A) bandwidth utilization
   (B) NetFlow collection
   (C) CPU utilization
   (D) application performance

4. Which calculation should you use to filter out peaks in network utilization data?

   (A) six sigma
   (B) standard deviation
   (C) 95th percentile
   (D) harmonic mean

Network Fault & Performance Troubleshooting

Objectives

- Detect and verify network faults
- Determine the scope of the network fault
- Collect and analyze network monitoring data to determine the cause of a network fault
- Detect and verify performance issues

- Determine the scope of the performance issue
- Collect and analyze network monitoring data to determine the cause of the performance issue

Study Resources

◻ Network Fault and Performance Troubleshooting »

▶ Video: Network Fault and Performance Troubleshooting »

Sample Questions

1. Your network management system (NMS) indicates that a device is down. As a troubleshooting step you attempt to telnet to the device, and you are able to successfully connect. However, pinging the device fails. What should you do next to troubleshoot this situation?

   (A) verify layer 2 connectivity to the device
   (B) verify that the "down" device can ping the NMS
   (C) verify that the ICMP service on the NMS is functioning
   (D) verify the SNMP community string for the device

2. You have recently started deploying a new type of router on your network. What should you do to ensure that the SNMP traps received from these devices are correctly interpreted by your network management system (NMS)?

   (A) contact the router vendor for a firmware update
   (B) review your firewall rules to ensure the traps are not being blocked en route
   (C) contact the router vendor for the latest MIBs and apply to your NMS
   (D) verify that your NMS is using the correct SNMP community strings

3. Your company outsources CRM to a SaaS company. Users are complaining that the CRM is down. You are able to verify that Internet connectivity is good and that other Internet sites can be accessed. You contact the CRM provider and find that none of their other customers are having issues. You attempt to ping the IP address from your network management system (NMS), but the ping fails. After reviewing recent changes to your outside router's configuration, you determine that an access control list (ACL) update is causing the problem. At which layer of the OSI model is the problem occurring?

   (A) layer 1
   (B) layer 2
   (C) layer 3
   (D) layer 5

SolarWinds NPM Administration

Objectives

- Manage accounts in SolarWinds NPM

- Discover and manage network elements (e.g. nodes, interfaces, volumes) using SolarWinds NPM

- Configure and use the SolarWinds NPM Universal Device Poller (UnDP)

- Create and run standard and customized SolarWinds NPM reports

- Configure an SolarWinds NPM alert and verify the logic

- Configure and manage Syslog and SNMP Traps

- Customize Orion web console

- Customize SolarWinds NPM custom properties, views, and menu bars

- Create and maintain SolarWinds NPM maps

- Scale SolarWinds NPM and optimize its performance

- Identify the ways in which SolarWinds NPM can integrate with other management products

- Explain the technical capabilities and limitations of each Orion module

- Leverage the expertise and custom resources on thwack

Study Resources

- NPM Administration »

- Video: NPM Administration »

- Video: Web Administration and Customization »

- Video: Managing Devices »

- Video: Alerts and Events »

- Video: Managing Syslog and SNMP Traps »

- Video: Scalability and Performance »

Sample Questions

1. You need to create an account that can see only a subset of the nodes being monitored by SolarWinds NPM. What would you add to the account to make this possible?

   (A) account views

   (B) account limitations

   (C) account permissions

   (D) view permissions

2. One of your network engineers is using both SolarWinds NPM and Engineer's Toolset. The engineer cannot access the toolset from within the Orion Web Console. What should you enable on the engineer's Orion account?

   (A) Allow Administrator Rights

   (B) Allow Browser Integration

   (C) Allow PassLink

   (D) Allow Advanced Customization

3. Universal Device Pollers (UnDP) can be applied to which two object types? (Choose two.)

   (A) nodes
   (B) volumes
   (C) interfaces
   (D) applications
   (E) monitors

4. Where should an alert be created for a Universal Device Poller (UnDP)?

   (A) Basic Alerts Manager
   (B) Universal Device Poller
   (C) Orion Web Console
   (D) Advanced Alert Manager

5. What can be accomplished with the Report Grouping feature in Report Writer?

   (A) limit the content of the reports
   (B) modify the format of the reports
   (C) manage the distribution of the reports
   (D) schedule the distribution of the reports

6. You have been asked for a report that shows the top 50 interfaces by percent utilization. What is the most time-efficient way to create this report in SolarWinds NPM?

   (A) create a new interface report and restrict to the top 50 using a filter
   (B) run the default top 25 interfaces by percent utilization over different timeframes
   (C) edit default top 25 interfaces by percent utilization report and update to the top 50
   (D) create a new advanced SQL query report

7. You have been asked to provide reports on bandwidth utilization during business hours for each of your remote sales offices for the last month. How should you design this report in SolarWinds NPM?

   (A) pull all of the usage data and average it by month
   (B) pull last month's usage data and sort it by time of day
   (C) pull this year's usage data and filter by month
   (D) pull last month's usage data and filter out non-business hours

8. In SolarWinds NPM, you want to send an alert to Engineer A first. If Engineer A fails to acknowledge the alert within 30 minutes, you want to send the alert to Engineer. Which two settings must be defined to achieve this type of alert escalation? (Choose two.)

   (A) suppress this alert (Do Not Trigger) when the following condition exists
   (B) reset this alert when the following condition exists
   (C) execute this action XX minutes/hours/days after the alert
   (D) check this alert every XX seconds/minutes/hours
   (E) do not trigger this action until the condition exists for more than XX seconds/minutes/hours
   (F) do not execute this action if the alert has been acknowledged

9. You have added several WAN routers from different company sites to a network map and added a link line connecting the routers. How do you display link status on an SolarWinds NPM map?

   (A) drag and drop the status object on the link line

   (B) edit the link line and select the appropriate router interface

   (C) edit the router interface and enable Link Status

   (D) edit Router Status and enable the Link Status option

10. During the planning process, which two factors determine the license level required for SolarWinds NPM? (Choose two.)

    (A) total number of nodes

    (B) total number of CPUs of monitored devices

    (C) total number of users

    (D) total number of interfaces

    (E) total number of sites

Sample Questions Answer Key

Network Management Fundamentals

1. C 2. D 3. D 4. C

Network Management Planning

1. A, D 2. C 3. C

Network Management Operations

1. C 2. C 3. B 4. C

Network Fault & Performance Troubleshooting

1. B 2. C 3. C

SolarWinds NPM Administration

1. B 2. B 3. A, C 4. D 5. B
6. C 7. D 8. C, F 9. B 10. A, D