

Resolving problems with a local area network



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Network user problems: Explain different problems that a user of a local area network may face while accessing the network.

Poor or bad cable issue: -Poor or bad cable issue is a problem of a local area network which faces by user while accessing the network. In this problem, if the client computer is capable for connect to the network, the performance might be reducing. Everyone could not be able to attach to the computer. Moreover, the current Gigabit network to the desktop is general, so that is why Gigabit category 5 will not work for less than concert and four pairs of cable as well.

Can't get an IP address:- The system is disconnected or ineffective. The operating system that can alert an address of the DHCP server (Dynamic Host Configuration Protocol) has not received. Furthermore, afterwards verifying the status of the system adapter can be configured to it. DHCP server could be out and server service will be interrupted as well. In addition, the device never reached the server for the first time.

Printing problem issue:- Printing problem is also of user area network which faces by user while accessing the network. Printing does not constantly work on network. To determine if a user is experiencing this problem, many people have the same problem. Moreover, only one problem, so it may be that the computer is not properly mapped to the printer server. If it does not cause the network between the client and the printer can be responsible for it.

Provide a scenario as an example to explain a user having difficulties accessing the network.

Problem Detail: In this company, user faced local area networking problem while accessing the network. This is poor or bad cable. A In this problem, if client computer is capable for connecting to the network, then performance can reduce. Gigabit cat5 will not work for four pairs of cable.

Name of the TechnicianLakhwinder Kaur

Date and Time10/02/2017- 12. 00pm

Service Hours30 minutes

Proposed Solution:

First of all, user should check the cable and find out the errors. Then, if problem in cable so, change the cable.

ResourceInternet, A CrimpingA Tools, Cable

Costs\$20

Procedure PersonalFirst of all, I did find the problem and

Then, got the information from internet,

A A How we can solve the problem. Finally, I

did solve my problem.

Company ContactAddressAWI International Education Group

Information

Phone02232078935

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Provide a scenario as an example to explain problems related with file or application server.

Spark is a company in Auckland (New Zealand). This company have lots of computers. Users faced so many problems like hard disk failure, security issues and slow speed as well. Find the issue with the help of internet and then, installed antivirus software and got information how can fix it. Finally, I resolved the problem.

Identify and describe the potential solution to any two of the problems mentioned above.

Solution of Hard disk failure issue: -Firstly, system should be shut down properly. It also is stay away from the installing supposed software. Hard disk ought to be clean commonly. Structure do update time to time.

Moreover, should swap the HDD after three to four year.

Solution of security issues:-There are so many good antivirus programs for the solution of security issue. Update the antivirus software version to secure the computer system for malware and provide security providers on the internet against viruses, Trojans etc.

Create a form to document the problems and their solutions in knowledge base.

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AAAAAA Knowledge Base-Form

Name of the Company Spark. com

Client's Name Chris

Date and Time 10/02/2017- 12. 30pm

Problem Detail:

Hard disk failure issue of file server. This problem happen whiles a disk drive malfunction and accumulated the information and it can't be configuration to computer properly.

Name of the Technician Tiago

Date and Time 10/02/2017- 12. 30pm

Service Hours 25 minutes

Proposed Solution:

In beginning, I got information from internet how we can find this problem and fix it I did start find the problem. A Then, installed the software for remove the problem. Structure should update time to time.

Resource Laptop, Internet,

Costs \$20

Procedure Personal Computer, Internet, Antivirus software

Company Contact Address 123 Welson Street, Auckland

Information Phone 0224356737

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Performance issues: Explain different issues related to network performance.

Hard drive usage: -Hard drive usage is first and the foremost issue of network performance. Mostly information exchange starts and finishes with a hard drive. Specifically, if at least two projects attempt to get to the hard drive in the meantime, information throughput will drop exponentially. Moreover, it is normally the slowest part inside the machine.

CPU usage: -CPU must be shared by greater part of the product running on a framework. Framework with different CPUs is not quicker than those of single CPU. In present day working frameworks, there are regularly twenty to sixty projects running when the client is not doing anything. Window is here and then slower on different CPU.

RAM:-In spite of the fact that system information exchange does not ordinarily include much direct memory utilization.

Moreover, user computer accidentally start again as user in the central of something. A The folder structure of hard drive might be gradually deteriorated and user will not longer be able to boot user machine.

Provide a scenario as an example to explain performance problem related to a local area network. Identify and describe the potential solution to any two of the problems mentioned above.

Solution of CPU usage problem: -In addition, user should update to your computer. Some programs are doing slow your computer, so that is why should remove that programs. As well should keep antivirus in your

Proposed Solution:

Firstly, did check the memory modules which module is not working.

Then, find the problem in memory slot and finally change the motherboard and solve it.

ResourceLaptop, Internet, Motherboard, antivirus

Costs\$50

Procedure PersonalIn addition, I find the problem of RAM. Then ,

AA
AAAA Search on internet how we can fix it.

Company ContactAddress20 Queen Street, Auckland

InformationPhone0221451737

Website

AA TASK 2

Monitor and maintain the performance of a local area network:

2. 1A A Identify and list any 5 network monitoring tools. AlsoA A A A A describe the features of those tools which deal with the performance issues of a local area network.

Monitoring tools and features

Total network monitor: -This device is the non-stoppable host, monitors network services. They also informed us that all issues need attention. Apart from this, this trouble is given a full report. The device is fixed to troubles successfully or negative consequence or still using the color code was imperfect. Nagios: -A flawless network to run all applications and all services must be up and running on the network at all times. An application, services, helps administrators to maintain critical systems at all times. Furthermore, to keep all this time is going to be good and also we need special control equipment i. e Nagois. This application is the core monitoring engine acts as a heart. The dude: -This dude monitoring tool is responsive device. Everyone can create automatic analysis for the device. Apart from this, it detects the trouble and alerts you while monitoring devices. Microsoft network monitor: - Microsoft network monitor is local area network monitoring tool. This tool monitors the performance issues of a LAN network. Moreover, the operation control, to analyze and to capture the flow of traffic in the network allows to administrator. Mostly a device that network administrators must find easy to control. A This device is helpful for troubleshoot the networks problems and applications as well.

Advanced IP scanner: -In advanced IP scanner monitoring tool perfectly an administrator in a local area network, like network, wireless, routers devices for example mobile phones must be monitored. Moreover, this monitoring tool to share databases on a remote machine if HTTP and FTP has been able to connect as it helps us. This device allows starting the computer and shutting down the remote computer as well.

3. 1A A Identify and explain different security exposures and violations concerned with the security of a local area network.

Probes: - Probes confirm for protected servers or services so as to might be successively on computer on user LAN. A These tests are generally completed through programs that get a collection of IP addresses selected by the individual running the program. Moreover, there are some common services like mail, web and so on. Apart from this, when set up of other services then program try to observe. Furthermore, if it know how to login or else get access to that service. Probes are not to run some servers which you cannot recognized.

Worms: -A worm is a separate malware computer program. It is very harmful for network. Worm replicates itself to spread one system to another system. It does not require human intervention to spread. A It makes unusual to storage devices.

Virus: -Viruses are normally not security threat in a local area network to PCs. Virus can create lots of troubles. Moreover, it can be change the implementation of processor. It can transmit the virus one computer to another computer as well. Furthermore, virus can do loss the data. Due to the virus processor working slowly.

Trojan Horses: -Trojan horse is any malicious computer program which is used for hack into a computer through misleading client of its correct intention. This threat attacker's use for private information like as banking information, passwords and personal identity as well. Moreover, this threat use for spreading malware across the network.

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Also, it can be corrupt the data and deletion to files.

3. 2 Determine the possible solutions to these exposure and violations by giving at least 1 example each from an industrial perspective.

Solution of Virus: -Malicious software is very helpful for removing the virus, because without malicious software is very to remove the virus. Apart from this, there are some removal tools as well. User should install antivirus software for removing the virus. As well, user ought to be keep antivirus application for updating the computer.

Solution of Trojan Horses:-Firewall software could compose invisible to user PCs. Firewall software too advise to user while programs on user PCs try to the attached with internet without significance. It will give information if user gets some virus. User should remove problems which are affected by Trojan horses threat.

TASK 4

4. 1A A The sender in a LAN send 10110110; a hacker alter the data and the receiver receive 10100110. As a network expert analysis to find out the position of error bit.

P1

P2

1

P4

0

1

1

P8

0

1

1

0

1

2

3

4

5

6

7

8

9

10

11

12

P1 = 10101A A A A A A A A A A A A OddA A A A A P1= 1

P2 = 11111A A A A A A A A A A A A OddA A A A A P2= 1

P4 = 0110A A A A A A A A A A A A EvenA A A A P4= 0

P8 = 0110A A A A A A A A A A A A EvenA A A A P8= 0

Transmitting data

1

1

1

0

0

1

1

0

0

1

1

0

1

2

3

4

5

6

7

8

9

10

11

12

Hacker attack the receiver data

1

1

1

0

0

1

0

0

0

1

1

0

1

2

3

4

5

6

7

8

9

10

11

12

$P1 = 1\ 1\ 0\ 0\ 0\ 1\ A\ A\ A\ A\ A\ A\ A\ A\ A$ Odd

$P2 = 1\ 1\ 1\ 0\ 1\ 1\ A\ A\ A\ A\ A\ A\ A\ A\ A$ Odd

$P4 = 0\ 0\ 1\ 0\ 0\ A\ A\ A\ A\ A\ A\ A\ A\ A\ A\ A$ Odd

$P8 = 0\ 0\ 1\ 1\ 0\ A\ A\ A\ A\ A\ A\ A\ A\ A\ A\ A$ Even

Add parity bit: $P1 + P2 + P4 + P8 = P7$

So, P7 position is wrong.

4. 2 Analysis a 10 bit sequence 1010011110 and a divisor of 1011 for error checking using CRC.

Data: 1010011110

Divisor: 1011

1001000111

1

0

1

0

0

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1011

Finally, if answer is 0 then, it's correct.