



**LOMBA KOMPETENSI SISWA
SEKOLAH MENENGAH KEJURUAN
TINGKAT NASIONAL XXVIII 2020**



Module Troubleshooting – Network layout
document.

**IT NETWORK SYSTEMS
ADMINISTRATION**

Module Troubleshooting Scenario

Instructions

- The answers must be in readable English, of course.
- For all answers, the judgment teams will NOT judge your spelling, grammar or wordings, only the actual cause and solutions.
- The complete troubleshooting scenario on the day of competition.
- The username and password for accessing the ESXi-host from VMware Workstation will be presented just before the competition starts.
- All the other usernames, passwords etc. within the troubleshooting scenario are presented on the day of the competition.
- Check VMs configured within engineer notes to investigate and find the problems.
- Write down your investigation and problem resolution using word document or notepad.

Troubleshooting ticket example

Hi, my name is Roger Jones. We cannot get any access to Internet from any workstation here in the office, either on my own PC (**WIN10-RJ**) or my partner William Svenssons PC (**WIN10-WS**). We have restarted both these computers, but there is still no Internet. When we try to reach www.worldskills.org it answers "Server not Found".

What is the cause of the problem?

"There isn't any forwarders configured in the Microsoft DNS Server and it's the wrong gateway configured in winclt."

Recommended solution to fix this:

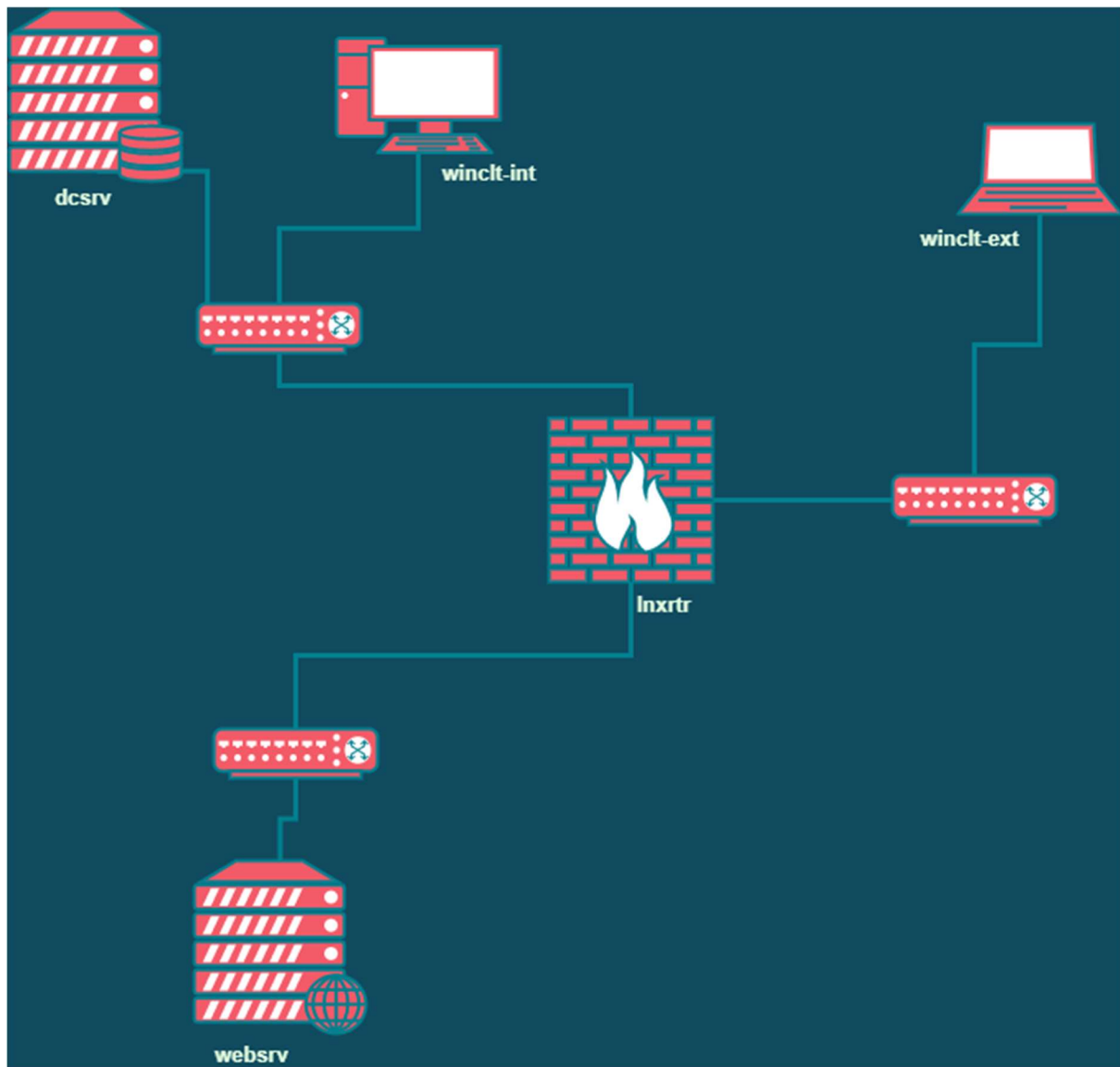
*"Put the forwarders to the Microsoft's DNS Server.
Fix the gateway in winclt"*

This both texts regarding the **cause of the problem** and the **recommended solution to fix the problem**, should be written by the competitor!

Engineer Notes

Welcome to the NSA-ID, you as a new employee will be challenged by your company to solve daily troubleshooting, during work from home, many employees ask help to solve their problems. The complete engineer notes will be sent by your coworker on the next week, prepare yourself and enjoy the work.

Network layout



VMs list

VM name	Address	Operating System	Services	Local Username Password		AD Users
dcsrv	172.16.10.10/24	Windows Server 2019	Active Directory, DNS, DHCP, File sharing	Administrator	Skill39	Administrator/Skill39
winclt-int	dhcp	Windows 10		itnsa	Skill39	Check username on AD server, All user password is P@ssw0rd
winclt-ext	10.23.27.10/25	Windows 10		itnsa39	Skill39	-
lnxrtr	172.16.10.1/24 192.168.1.1/28 10.23.27.1/25	GNU/Linux Debian 10	Firewall, NAT	root	Skill39	-
websrv	192.168.1.5/28	GNU/Linux Debian 10	Webserver, FTP, Mail server	root	Skill39	-

Services:

DCSRV

Active Directory

- Domain: **lksitnsa.net**
- Users already imported, default password for ALL users is **P@ssw0rd**
- DCSRv's C:/homes/ as Home folder configured.

DHCP

- Scope name: **LKSITNSA**
- Range: 172.16.10.100-150
- Gateway: lnxrtr
- DNS: dcsrv

DNS

- A Record: www.lksitnsa.net, ftp.lksitnsa.net to **websrv**, mail.lksitnsa.net to **websrv** server.
- MX Record to mail.lksitnsa.net.

File sharing

- Group folder sharing
DCSRV's C:/ITNSA/Competitors is already mapped to winclt-int drive G:/Competitors
DCSRV's C:/ITNSA/Experts is already mapped to winclt-int drive G:/Experts

LNXRTR

- Routing enabled.
- Rules NAT for external configured (DNS, HTTP, SMTP, IMAP).
- Rules NAT for internet access configured.
- FORWARD Policy dropped, allow only the needed services.

WEBSRV

- Local users:
john with password: Skill39
jane with password: Skill39
- Webserver apache2
- Website directory: /var/www/html/lksitnsa/
- FTP (proftpd) with local users. It's used default home directory as ftp directory.
- MAIL smtp (postfix), Imap (dovecot) port configured.

WINCLT-INT

- Services and domain joined.

WINCLT-EXT

- External client.
- Access webserv services from outside using NAT on LNXRTR.
- Thunderbird (app already pinned on taskbar) mail client configured for user jane.