

**LOMBA KETERAMPILAN SISWA
SEKOLAH MENENGAH KEJURUAN
TINGKAT NASIONAL XXIV 2016**



**IT NETWORK SYSTEMS
ADMINISTRATION**

LKS2016_ITNSA_MODUL2

**MODUL 3
PACKET TRACER CHALLENGE 1**

**KEMENTERIAN PENDIDIKAN DAN KEBUDAYAAN
DIREKTORAT JENDERAL PENDIDIKAN MENENGAH
DIREKTORAT PEMBINAAN SEKOLAH MENENGAH KEJURUAN**

MODUL 3 – PACKET TRACER CHALLENGE 1

CONTENTS

This Test Project proposal consists of the following document/file:

LKSN2016_ITNSA_MODUL3_PT.pka

INTRODUCTION

The competition has a fixed start and finish time. You must decide how to best divide your time.

Please **carefully** read the following instructions!

Before the competition time start, please rename file LKSN2016_ITNSA_MODUL3_PT.pka to

M3_ "*SEATNUMBER*" _ "*FULLNAME*" .pka

ex. **M3_A1_ANGGA FRIYANTO.pka**

DO NOT FORGET TO SAVE YOUR PACKET TRACER FILE REGULARLY!

(The Cisco Packet Tracer program may crash and you could lose marks!)

PART I

CONFIGURE WITH INSTRUCTION BELOW

Nusantara Network System is network system to connect all regions of the country Indonesia. Some device already configured (Pre-Configured). You are only required to configure with instruction bellow. Each Region represented by Cluster, not every internal cluster can connect to Server in Cluster Center.

CLUSTER WEST

Tabel 1. Table Diagram Cluster West

Device	Interface	Vlan	Vlan & Pool Name	Network
ROW-1	GigabitEthernet 0/0.30	Vlan 30	MZ-A	172.19.0.0/25
	GigabitEthernet 0/0.31	Vlan 31	MZ-B	172.19.0.128/25
	GigabitEthernet 0/0.32	Vlan 32	MZ-C	172.19.1.0/25
	GigabitEthernet 0/0.33	Vlan 33	MZ-D	172.19.1.128/25

- ROW-1
 - Configure sub interface with information from table 1. (Use **IP FIRST HOST**)
 - Configure DHCP Server with Pool Name and Network information from table 1 (Configure Pool DHCP for All Network in subinterface). Give Correct Default Gateway and IP DNS Server 200.130.20.34.
 - Configure DHCP Exclude Address 10th First host for all pool. (e.x 172.19.0.1 – 172.19.0.10)
- All SWW Switch
 - Configure VLAN name on all switch cluster west with information from table 1.
 - Configure VTP with VTP domain **netacad.com** and VTP password **Secret123**. Make sure only **SWW-1** as VTP server.
 - Configure interface Fa0/1 until Fa0/5 with trunk mode in all switch device (**not rated, but this important**)
 - On the SWW-4 until SWW-7 configure interface VLAN membership with information below:
 - VLAN 30 = Fa0/6 – Fa0/10
 - VLAN 31 = Fa0/16 – Fa0/20
 - VLAN 32 = Fa0/11 – Fa0/15
 - VLAN 33 = Fa0/21 – Fa0/24
- All PC
 - Configure All PC with DHCP.

CLUSTER NORTH

- IP Addressing
 - Configure static IP Address on all device (Router & PC) Cluster North with Information based on Network Diagram (Topology).

- Static Routing
 - Configure static routing on RON-2; RON-3; RON-4; and RON-5, so all PC (PC 1, PC 2 & PC 3) can communications to each other. Use exit interface as parameter routing information.

CLUSTER EAST

- Routing
 - Configure default routing on ROE-1, using exit interface parameter.
 - Configure OSPF procs ID 100 with area 0 on ROE-1, ROE-2 and ROE-3. Advertisements all network address for each interface except interface serial ROE-1. Also give default-information originate on ROE-1.
- WR1 and WR2
 - Configure Internet port on WR1 and WR2 with internet connection type Static IP with information below:
 - IP last host from network 192.168.1.0/24 for WR1 and IP last host from network 192.168.2.0/24 for WR2.
 - Configure correct gateway for each device.
 - Configure IP DNS Server 200.130.20.34
 - Configure Wireless Network SSID **EAST@1.0** and security mode WPA2 Personal with passphrase **Secure1234** for **WR1**
 - Configure Wireless Network SSID **EAST@2.0** and security mode WPA2 Personal with passphrase **Secret1234** for **WR2**
- Wireless Client (Laptop, Tablet PC and Smartphone)
 - Configure wireless on Laptop1, Laptop3, Tablet PC1 and Smartphone0 to connect with wireless WR1.
 - Configure wireless on Laptop0, Laptop2 and Tablet PC0 to connect with wireless WR2

CLUSTER ROUTING

- Configure EIGRP with AS 10 and no auto-summary on CENTRAL, ROW-1, RON-1, RMD-1, RSO-1 and ROE-1. Advertisements all network address for each serial interface.

TESTING

- If all is configured, PC, Laptop, Tablet PC and Smartphone on Cluster WEST and EAST can access website <http://ditpsmk.net> in browser.