LOMBA INACOMP 1.0
TINGKAT NASIONAL TAHUN 2025

Elimination Round

Introduction

Network technology knowledge is becoming essential nowadays for people who want to build a successful career in any IT engineering field. This test project contains a lot of challenges from real life experience, primarily IT integration and IT outsourcing. If you are able to complete this project with a high score, you are definitely ready to service the network infrastructure for any multi-branch enterprise.

Description of project and tasks

This test project is designed using a variety of network technologies that should be familiar from the Cisco certification tracks.

Instructions to the Competitor

1. Read all tasks in each section before proceeding with any configuration. The completion of any item may require the completion of any previous or later item.
2. Save your configurations frequently; accidents do and will happen.
3. Points are awarded for working configurations only. Test the functionality of all the requirements before you submit the test project. Be careful, because as you configure one part, you may break a previous requirement or configuration.
4. Please use industrial best practice where possible!

Elimination Round INACOMP 1.0 BIDANG NETWORKING

As a Network Engineer at Universitas Negeri Jakarta (UNJ), you have been assigned the task of configuring and managing the campus network infrastructure to meet the requirements defined by the adastra Company.

Requirements :

Make sure the network device name matches the topology.

GW1-RTR

Configure **GigabitEthernet0/0** subinterfaces on **GW1-RTR** based on the IP addresses and VLAN IDs from the addressing table. Apply the correct encapsulation and IP settings to enable inter-VLAN routing.

- Routing EIGRP
  - AS number : **100**
  - Advertise all connected networks to **GW1-RTR**

- **ACL**

  Use named ACL to apply this configuration, using the information below :
  Name : **RULE_PING**
  - permits only ping response packets to come in on interface Gi0/1 from **any** networks towards **VLAN 65** networks (**Admin**).
  - permits ping packets to come in on interface Gi0/1 from **any** networks towards **VLAN 64** networks (**Server**).
  - permits EIGRP protocol updates to come in on interface Gi0/1 from **any** to **any** networks
  - Apply this ACL on the appropriate interface.

GW2-RTR

Configure GigabitEthernet0/1 and GigabitEthernet0/2 subinterfaces on GW2-RTR using the IP addresses and VLAN IDs provided in the addressing table. Make sure each subinterface uses the correct encapsulation and IP to enable inter-VLAN routing.

- Routing EIGRP
  - AS number : 100
  - Advertise all connected networks to GW2-RTR
  - Enables manual summarization for EIGRP AS 100 on the specific interface for GDS and GRK networks.
- *ACL*

  Use named ACL to apply this configuration, using the information below :
- Name : **RULE_GRK**
  - permit HTTP traffic sourced from **VLAN 21** to **WEB-SRV-2**
  - permit DNS traffic sourced from **VLAN 21** to **DNS-SRV**
  - permit ping traffic sourced from **VLAN 21** to **WEB-SRV-2**
  - permit ping traffic sourced from **VLAN 21** to **DNS-SRV**

    - permit access sourced from **VLAN 21** (**Assistant)** to **VLAN 13 (Class)**
- Apply this ACL on the appropriate interface.

DNS-SRV

The DNS-SRV is configured to handle domain name resolution within the network. In this setup, the following domain entries are defined:

- **WEB-SRV-1** is assigned the domain **unj.ac.id**
- **WEB-SRV-2** is assigned the subdomain **lms.unj.ac.id**

SW-DC-PUSTIKOM

VLAN Configuration

Create and name the following VLANs on SW1-DC-PUSTIKOM only. VTP advertises the new VLANs to SW2- DC-PUSTIKOM and SW3- DC-PUSTIKOM

- VLAN ID : 64 , Name : Server
- VLAN ID : 65 , Name : Admin

VTP Configuration

Configure VTP with information below:

- Domain : inacomp1.0
- Password : rahasia

Etherchannel

Configure EtherChannel on the two backbone links to the servers using the standard (IEEE 802.3ad) protocol switches negotiate with each other :

- link to SW2 : Channel group : 1
- link to SW3 : Channel group : 2

SW-GDS

VLAN Configuration

Create and name the following VLANs on SW1-GDS only. VTP advertises the new VLANs to SW2- GDS abd SW3- GDS

- VLAN ID : 10 , Name : Lobby
- VLAN ID : 11 , Name : MeetingRoom
- VLAN ID : 12 , Name : Secret
- VLAN ID : 13 , Name : Class

VTP Configuration

Configure VTP with information below:

- Domain : **GDS**
- Password : **rahasia**

SW-GDK

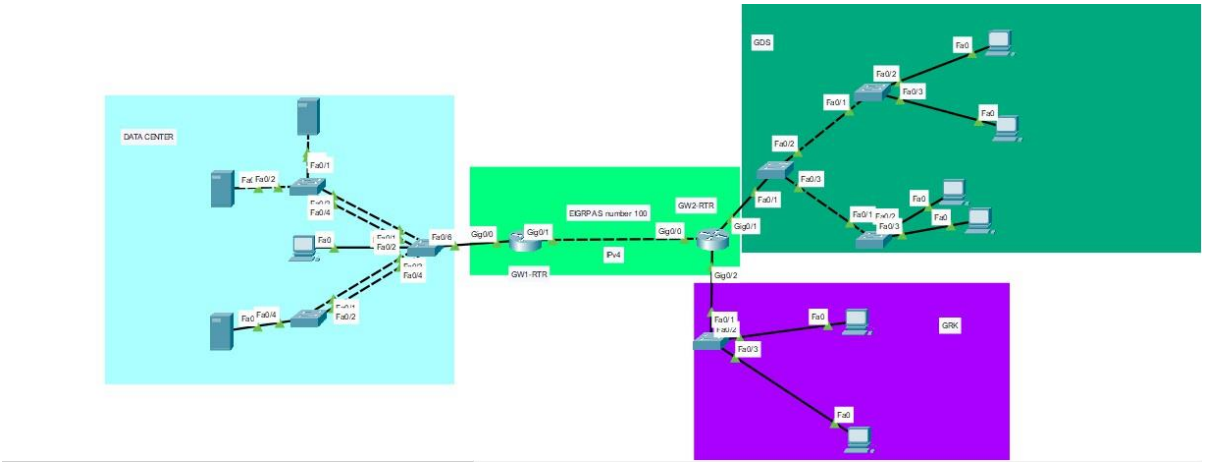
VLAN Configuration

Create and name the following VLANs on SW1-GRK.

- VLAN ID : 20 , Name : LabTIK
- VLAN ID : 21 , Name : Assistant

ALL PCs : Ensure all PCs have the appropriate IP address configuration.

TOPOLOGY



Addressing Table

Device	Interface	IP Address	Subnet Mask	Gateway
GW1-RTR	**Gi0/1**	100.100.100.1	255.255.255.252	-
	Gi0/0.64	10.55.64.1	255.255.255.0	-
	Gi0/0.65	10.55.65.1	255.255.255.0	-
GW2-RTR	**Gi0/0**	100.100.100.2	255.255.255.252	-
	Gi0/1.10	192.151.10.1	255.255.255.0	-
	Gi0/1.11	192.151.11.1	255.255.255.0	-
	Gi0/1.12	192.151.12.1	255.255.255.0	-
	Gi0/1.13	192.151.13.1	255.255.255.0	-
	Gi0/2.20	192.151.20.1	255.255.255.0	-
	Gi0/2.21	192.151.21.1	255.255.255.0	-
PC1-GDS	**NIC**	192.151.10.10	255.255.255.0	192.151.10.1
PC2- GDS	**NIC**	192.151.11.10	255.255.255.0	192.151.11.1
PC3- GDS	**NIC**	192.151.12.10	255.255.255.0	192.151.12.1
PC4- GDS	**NIC**	192.151.13.10	255.255.255.0	192.151.13.1
PC1- GRK	**NIC**	192.151.20.10	255.255.255.0	192.151.20.1
PC2- GRK	**NIC**	192.151.21.10	255.255.255.0	192.151.21.1
WEB-SRV-1	**NIC**	10.55.64.100	255.255.255.0	10.55.64.1
WEB-SRV-2	**NIC**	10.55.64.200	255.255.255.0	10.55.64.1
DNS-SRV	**NIC**	10.55.64.254	255.255.255.0	10.55.64.1
PC-admin	**NIC**	10.55.65.2	255.255.255.0	10.55.65.1