Balai Pengembangan Talenta Indonesia
Pusat Prestasi Nasional
Kementerian Pendidikan, Kebudayaan, Riset, dan Teknologi

MERDEKA BELAJAR

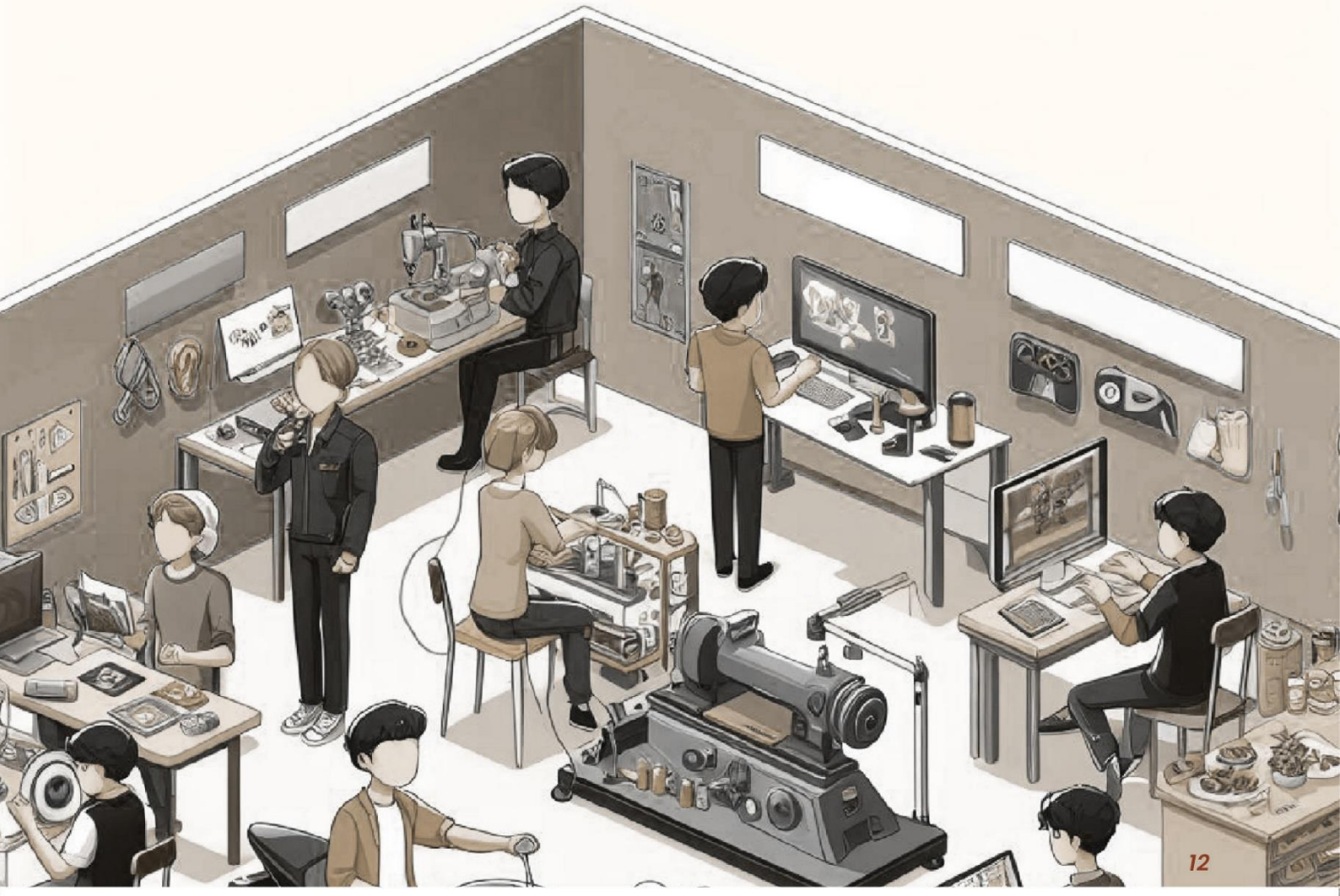
LKS SMK TINGKAT NASIONAL

SMK

Kisi-Kisi

Lomba Kompetensi Siswa Nasional 2024

Teknologi Informasi Sistem Administrasi Jaringan *(IT Network System Administration)*



MERDEKA BERPRESTASI
Talenta Vokasi Menginspirasi

KISI-KISI

TEKNOLOGI INFORMASI SISTEM ADMINISTRASI JARINGAN

(IT NETWORK SYSTEMS ADMINISTRATION)

LOMBA KOMPETENSI SISWA SEKOLAH MENENGAH KEJURUAN
TINGKAT NASIONAL XXXII
TAHUN 2024

Modul A System Integration Troubleshooting

Your new responsibility entails serving as a support engineer, tasked with aiding a non-profit organization in addressing office-related issues. This involves assisting with troubleshooting across their integrated system, which includes Debian servers, Windows servers, Cisco routers, Windows clients, and Debian clients.

Services, protocols or technologies that need to be prepared:

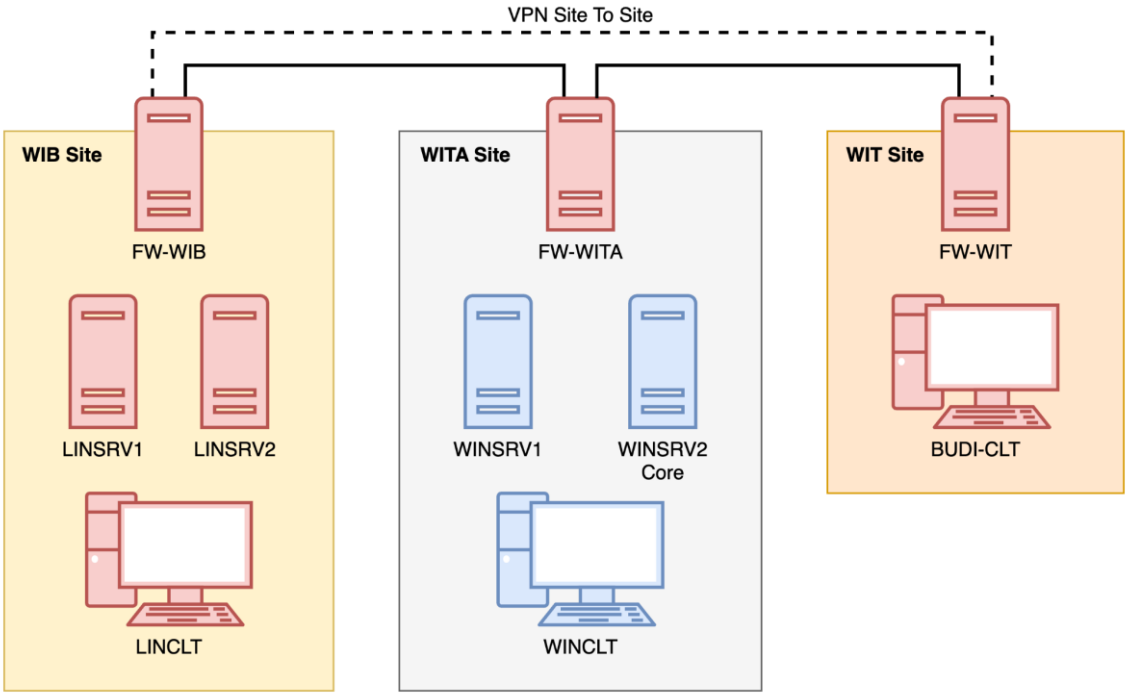
- Routing
- VPN
- Firewall
- Web Server
- Reverse Proxy
- Active Directory
- DNS Server
- SSH Server
- Remote Desktop
- File Sharing

Modul B Client Server

Description

An IT company specializing in automotive industry aims to broaden their sales in Indonesia by establishing branches across different time zones in the country. As engineers, we are tasked with configuring servers according to their requirements. Subsequently, details regarding the required Topology and Services will be provided.

Topology



Services

WIB Site:

- DNS Server
- WEB Server
- Email Server with SMTP and IMAP
- Roundcube Webmail
- DHCP Server
- RAID
- Certificate Authority
- Site to Site Openvpn
- Sudo Restriction

WITA Site:

- Active Directory Server
- DNS Server
- Web Server

- Windows Backup
- DFS Replication
- Cron/Scheduled Task
- ISCSI

WIT Site:

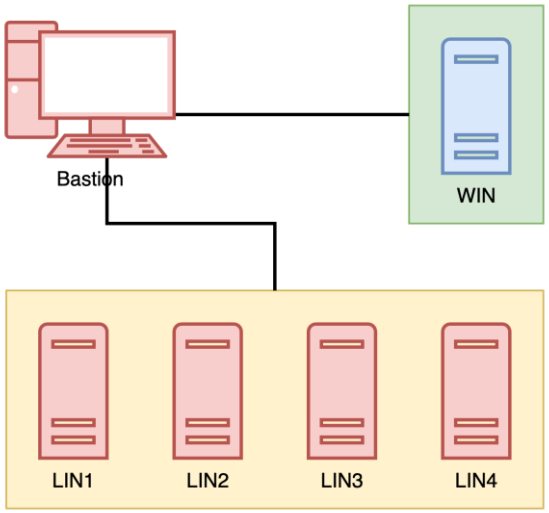
- Site To Site Openvpn
- Remote Access VPN

Modul C Infrastructure Programmable & Automation

Description

The government infrastructure has already been manually configured, but they now want to transition to Infrastructure as Code (IAC) using Ansible tools. We are tasked with designing this IAC solution based on the following criteria.

Topology



Task requirements:

- Use Jinja2 Template
- Managing anisble inventory
- Managing role
- Managing secrets
- Playbook are idempotent
- Loop

Service that will install use ansible

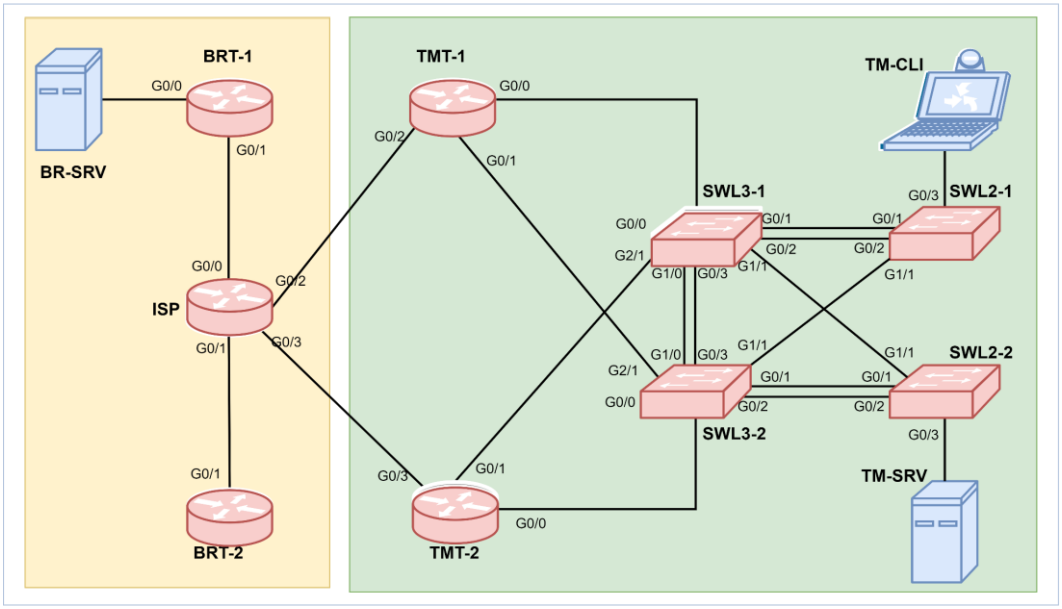
- DNS Server
- WEB Server
- HAProxy

Modul D Network Systems

Description

You have been assigned the task of configuring the network infrastructure for a multinational company's new area, encompassing switching, routing, and other essential network services. The objective is to establish connectivity among all nodes through both static and dynamic routing methods. Additionally, to enhance performance, the network system integrates radius services and server monitoring. Furthermore, as a critical element of the Test Project task, ensuring security is paramount.

Topology



Services, protocols, or technologies that need to be prepared:

- Basic Configuration & IP Addressing
- Switching
  - VLAN
  - Spanning Tree Protocol (STP)
  - EtherChannel
  - FHRP
- Routing
  - Inter-VLAN Routing
  - Static Routing & Dynamic Routing
- Services
  - Dynamic Addressing
  - Network Address Translation
  - Radius
  - Network Monitoring
- LAN Security

BALAI PENGEMBANGAN TALENTA INDONESIA
PUSAT PRESTASI NASIONAL
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