

**KATALOG PELATIHAN MAHASISWA
PRODI MANAJEMEN INFORMATIKA
TAHUN 2023**

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A. Deskripsi singkat:

Pelatihan dan sertifikasi MikroTik Certified Network Associate (MTCNA) merupakan sebuah program sertifikasi internasional di bidang jaringan komputer yang dikeluarkan oleh MikroTik untuk para Network Engineer pada tingkatan *entry-level*. Pelatihan dan sertifikasi ini membantu Network Engineer untuk memahami dasar-dasar dan fungsi-fungsi yang terdapat pada MikroTik Routerboard, serta fitur, implementasi dan *troubleshooting* secara umum. Mahasiswa yang berhasil menyelesaikan pelatihan dan sertifikasi berhak mendapatkan gelar non akademik MikroTik Certified Network Associate (MTCNA).



B. Keuntungan mengikuti pelatihan dan sertifikasi:

a. Pengetahuan yang lebih baik:

Sertifikasi MTCNA menunjukkan bahwa seseorang memiliki pengetahuan yang cukup tentang Mikrotik RouterOS dan jaringan, yang dapat digunakan untuk meningkatkan kinerja dan menyelesaikan masalah jaringan dengan lebih efektif.

b. Karir yang lebih baik:

Sertifikasi MTCNA dapat meningkatkan kesempatan mendapatkan pekerjaan yang lebih baik dan gaji yang lebih tinggi dibandingkan dengan seseorang yang tidak memiliki sertifikasi tersebut.

c. Prestasi yang diakui:

Sertifikasi MTCNA dikeluarkan oleh MikroTik, sebuah perusahaan terkemuka dalam bidang jaringan, sehingga menunjukkan bahwa seseorang memiliki kompetensi yang diakui oleh perusahaan tersebut.



C. Modul:

Title	Objectives
Module 1 Introduction	<ul style="list-style-type: none">About MikroTik<ul style="list-style-type: none">What is RouterOSWhat is RouterBOARDFirst time accessing the router<ul style="list-style-type: none">WinBox and MAC-WinBoxWebFig and Quick SetDefault configurationRouterOS command line interface (CLI)<ul style="list-style-type: none">Null Modem cableSSH and TelnetNew terminal in WinBox/WebFigRouterOS CLI principles<ul style="list-style-type: none"><tab>, double<tab>, “?”, navigationCommand history and its benefitsInitial configuration (Internet access)

Title	Objectives
	<ul style="list-style-type: none"> • WAN DHCP-client • LAN IP address and default gateway • Basic Firewall – NAT masquerade • Upgrading RouterOS <ul style="list-style-type: none"> • Package types • Ways of upgrading • RouterBOOT firmware upgrade • Router identity • Manage RouterOS logins • Manage RouterOS services • Managing configuration backups <ul style="list-style-type: none"> • Saving and restoring the backup • Difference between a backup and an export (.rsc) file • Editing an export file • Resetting a RouterOS device • Reinstalling a RouterOS device (Netinstall) • RouterOS license levels • Sources of additional information <ul style="list-style-type: none"> • Wiki.mikrotik.com • Forum.mikrotik.com • Mum.mikrotik.com • Distributor and consultant support • Support@mikrotik.com
Module 2 DHCP	<ul style="list-style-type: none"> • DHCP server and client <ul style="list-style-type: none"> • DHCP client • DHCP server setup • Leases management • DHCP server network configuration • Address Resolution Protocol (ARP) <ul style="list-style-type: none"> • ARP modes • RouterOS ARP table
Module 3 Bridging	<ul style="list-style-type: none"> • Bridging overview <ul style="list-style-type: none"> • Bridge concepts and settings • Creating bridges • Adding ports to bridges • Bridge wireless networks <ul style="list-style-type: none"> • Station bridge
Module 4 Routing	<ul style="list-style-type: none"> • Routing overview <ul style="list-style-type: none"> • Routing concepts • Route flags • Static routing <ul style="list-style-type: none"> • Creating routes • Setting default route • Managing dynamic routes • Implementing static routing in a simple network
Module 5 Wireless	<ul style="list-style-type: none"> • 802.11a/b/g/n/ac Concepts <ul style="list-style-type: none"> • Frequencies (bands, channels) data-rates / chains (tx power, rx sensitivity, country regulations) • Setup a simple wireless link <ul style="list-style-type: none"> • Access Point configuration

Title	Objectives
	<ul style="list-style-type: none"> • Station configuration • Wireless Security and Encryption <ul style="list-style-type: none"> • Access List • Connect List • Default Authenticate • Default Forward • WPA-PSK, WPA2-PSK • WPS accept, WPS client • Monitoring Tools <ul style="list-style-type: none"> • Snooper • Registration table
Module 6 Firewall	<ul style="list-style-type: none"> • Firewall principles <ul style="list-style-type: none"> • Connection tracking and states • Structure, chains and actions • Firewall Filter in action <ul style="list-style-type: none"> • Filter actions • Protecting your router (input) • Protection your customers (forward) • Basic Address-List • Source NAT <ul style="list-style-type: none"> • Masquerade and src-nat action • Destination NAT <ul style="list-style-type: none"> • Dst-nat and redirect actions • FastTrack
Module 7 QoS	<ul style="list-style-type: none"> • Simple Queue <ul style="list-style-type: none"> • Target • Destinations • Max-limit and limit-at • Bursting • One Simple queue for the whole network (PCQ) <ul style="list-style-type: none"> • Pcq-rate configuration • Pcq-limit configuration
Module 8 Tunnels	<ul style="list-style-type: none"> • PPP settings <ul style="list-style-type: none"> • PPP profile • PPP secret • PPP status • IP pool <ul style="list-style-type: none"> • Creating pool • Managing ranges • Assigning to a service • Secure local network <ul style="list-style-type: none"> • PPPoE service-name • PPPoE client • PPPoE server • Point-to-point addresses • Secure remote networks communication <ul style="list-style-type: none"> • PPTP client and PPTP server (Quick Set) • SSTP client

Title	Objectives
<p>Module 9</p> <p>Misc</p>	<ul style="list-style-type: none"> • RouterOS tools <ul style="list-style-type: none"> • E-mail • Netwatch • Ping • Traceroute • Profiler (CPU load) • Monitoring <ul style="list-style-type: none"> • Interface traffic monitor • Torch • Graphs • SNMP • The Dude • Contacting support@mikrotik.com <ul style="list-style-type: none"> • Supout.rif, autosupout.rif and viewer • System logs, enabling debug logs • Readable configuration (item comments and names) • Network diagrams

2. PELATIHAN HUAWEI



A. Deskripsi singkat:

HCIA-Datacom merupakan pelatihan dan sertifikasi internasional yang dikeluarkan oleh HUAWEI di bidang jaringan komputer. Pelatihan dan sertifikasi ini akan mengajarkan tentang pengetahuan dan keterampilan komunikasi data dasar, di antaranya adalah *Data Communication Network Basis*, *Network Reference Model*, *IP Routing Basics*, *STP Principles and Configuration*, dan *Network Programmability and Automation*. Mahasiswa yang berhasil menyelesaikan pelatihan dan sertifikasi berhak mendapatkan gelar non akademik Huawei Certified ICT Associate (HCIA).



B. Keuntungan mengikuti pelatihan dan sertifikasi:

a. Validasi pengetahuan:

Sertifikasi HCIA Datacom memberikan validasi resmi terhadap pengetahuan dan pemahaman Anda tentang konsep dan teknologi jaringan datacom. Ini menunjukkan kepada calon employer atau klien bahwa Anda memiliki pemahaman yang solid tentang prinsip-prinsip jaringan dan komunikasi datacom.

b. Kredibilitas profesional:

HCIA Datacom adalah sertifikasi industri yang diakui secara luas dan dihargai oleh organisasi dan professional di seluruh dunia. Dengan memiliki sertifikasi ini, Anda meningkatkan kredibilitas

professional Anda dan memberikan kepercayaan kepada employer atau klien bahwa Anda memiliki keahlian yang relevan dan terverifikasi.

c. Peluang karir:

Sertifikasi HCIA di Datacom dapat membuka pintu bagi peluang karir yang lebih baik dalam bidang jaringan datacom. Sertifikasi ini dapat meningkatkan prospek Anda untuk mendapatkan pekerjaan baru atau naik pangkat di perusahaan Anda saat ini. Juga, dapat membedakan Anda dari pesaing lain dalam industri yang sama.



C. Modul:

Title	Objectives
Module 1 Data communication and network basics	<ul style="list-style-type: none"> • Basic knowledge of routing and switching • Basic network concepts, IP network architecture, and standardization organizations and protocols • OSI and TCP/IP protocol models, functions of each layer, and packet encapsulation • ARP principles • TCP/UDP principles • Data forwarding process • Basic concepts and life cycle of campus network • Basic principles and operations of the VRP
Module 2 Build an IP network with interconnection and interworking	<ul style="list-style-type: none"> • IPv4 basics (basic concepts, address classification, and subnet division) • Basics of IP routing and forwarding principles of layer 3 devices • Principles of the static routing, basic principles of the OSPF protocol, and implementation in the VRP • How to use static route and OSPF technologies to build small-sized routing network in Huawei Router
Module 3 Ethernet switching network construction	<ul style="list-style-type: none"> • Ethernet technology and basic principles of switches • STP, RSTP, and VLAN principles and implementation in the VRP • Basic principles and configuration of technologies such as link aggregation and stacking • How to use technologies such as STP, RSTP, and VLAN to build a small-scale switching network
Module 4 Cyber security infrastructure and network access	<ul style="list-style-type: none"> • Basic principles and configuration methods of ACLs • AAA principles and application scenarios • Basic principles of NAT • NAT application scenarios and configuration methods
Module 5 Network services and applications	<ul style="list-style-type: none"> • Basic principles of Telnet, FTP, TFTP, DHCP, DNS, NTP, and HTTP • Configuration of FTP, DHCP and Telnet
Module 6 WLAN basics	<ul style="list-style-type: none"> • Basic concepts of WLAN (802.11 protocol family, basic devices, and basic networking) • WLAN basic working process

Title	Objectives
	<ul style="list-style-type: none"> • Basic WLAN configuration
Module 7 WAN basics	<ul style="list-style-type: none"> • Basic WAN concepts • PPP and PPOE configuration
Module 8 Network management and O&M	<ul style="list-style-type: none"> • Basic concepts of network management • SNMP protocol basics • Basic concepts of Huawei SDN solution
Module 9 IPv6 basics	<ul style="list-style-type: none"> • IPv6 basics (address format, pocket format, and address classification) • IPv6 address configuration method and process • IPv6 static route configuration
Module 10 SDN and automation basics	<ul style="list-style-type: none"> • Basic SDN concepts and Huawei products and solutions • Basic NFV concepts and Huawei products and solutions • Basic concepts of automatic O&M • Python basics

3. PELATIHAN MICROSOFT

3.1 Microsoft Azure Fundamentals



A. Deskripsi singkat:

Kursus pelatihan Microsoft Azure Fundamentals diselenggarakan oleh perusahaan teknologi terkemuka, yaitu Microsoft. Pada pelatihan ini Anda berkesempatan untuk mempelajari pengetahuan tentang konsep *cloud*, layanan Azure, beban kerja Azure, keamanan dan privasi di Azure, serta biaya dan *support* pada Azure.



B. Keuntungan mengikuti pelatihan dan sertifikasi:

- a. CV yang menarik karena pelatihan dan sertifikasi berstandar internasional
- b. Karir yang fleksibel dan mudah
- c. Gaji yang meningkat



Title	Objectives
<p>Learning Path 1: <u>Describe Cloud Concepts</u></p>	<ul style="list-style-type: none"> • Module 1: Describe Cloud Computing <ul style="list-style-type: none"> • Introduction to Microsoft Azure Fundamentals (2 min) • Introduction to cloud computing (1 min) • What is cloud computing (3 min) • Describe the shared responsibility model (3 min) • Define cloud models (4 min) • Describe the consumption-based model (3 min) • Knowledge check (5 min) • Summary (2 min) • Module 2: Describe the Benefits of using Cloud Services <ul style="list-style-type: none"> • Introduction (1 min) • Describe the benefit of high availability and scalability in the cloud (5 min) • Describe the benefit of reliability and predictability in the cloud (2 min) • Describe the benefits of security and governance in the cloud (2 min) • Describe the benefits of manageability in the cloud (2 min) • Knowledge check (3 min) • Summary (2 min) • Module 3: Describe Cloud Service Types <ul style="list-style-type: none"> • Introduction (1 min) • Describe infrastructure as a service (2 min) • Describe platform as a service (2 min) • Describe software as a service (2 min) • Knowledge check (3 min) • Summary (2 min)
<p>Learning Path 2: <u>Describe Azure Architecture and Services</u></p>	<ul style="list-style-type: none"> • Module 1: Describe the Core Architectural Components of Azure <ul style="list-style-type: none"> • Introduction (1 min) • What is Microsoft Azure (4 min) • Get started with Azure accounts (4 min) • Exercise – Explore the learn sandbox (10 min) • Describe Azure physical infrastructure (6 min) • Describe Azure management infrastructure (7 min) • Exercise – Create an Azure resource (10 min) • Knowledge check (4 min) • Summary (2 min) • Module 2: Describe Azure Compute and Networking Services <ul style="list-style-type: none"> • Introduction (1 min) • Describe Azure Virtual Machines (6 min) • Exercise – Create an Azure Virtual Machine (10 min) • Describe Azure Virtual Desktop (5 min) • Describe Azure Containers (6 min) • Describe Azure Functions (4 min) • Describe application hosting options (3 min) • Describe Azure Virtual Networking (5 min)

Title	Objectives
	<ul style="list-style-type: none"> • Exercise – Configure network access (10 min) • Describe Azure Virtual Private Networks (5 min) • Describe Azure ExpressRoute (4 min) • Describe Azure DNS (3 min) • Knowledge check (4 min) • Summary (2 min) • Module 3: Describe Azure Storage Services <ul style="list-style-type: none"> • Introduction (1 min) • Describe Azure storage accounts (5 min) • Describe Azure storage redundancy (6 min) • Describe Azure storage services (8 min) • Exercise – Create a storage blob (10 min) • Identify Azure data migration options (5 min) • Identify Azure file movement options (3 min) • Knowledge check (4 min) • Summary (2 min) • Module 4: Describe Azure Identity, Access, and Security <ul style="list-style-type: none"> • Introduction (1 min) • Describe Azure directory services (5 min) • Describe Azure authentication methods (6 min) • Describe Azure external identities (3 min) • Describe Azure conditional access (3 min) • Describe Azure role-based access control (5 min) • Describe zero trust model (3 min) • Describe defense-in-depth (4 min) • Describe Microsoft Defender for cloud (6 min) • Knowledge check (4 min) • Summary (2 min)
<p>Learning Path 3: <u>Describe Azure Management and Governance</u></p>	<ul style="list-style-type: none"> • Module 1: Describe Cost Management in Azure <ul style="list-style-type: none"> • Introduction (1 min) • Describe factors that can affect costs in Azure (7 min) • Compare the pricing and total cost of ownership calculators (2 min) • Exercise – Estimate workload costs by using the pricing calculator (10 min) • Exercise – Compare workload costs using the TCO calculator (10 min) • Describe Azure cost management tool (4 min) • Describe the purpose of tags (3 min) • Describe defense-in-depth (4 min) • Knowledge check (4 min) • Summary (2 min) • Module 2: Describe Features and Tools in Azure for Governance and Compliance <ul style="list-style-type: none"> • Introduction (1 min) • Describe the purpose of Azure blueprints (3 min) • Describe the purpose of Azure policy (3 min) • Describe the purpose of resource locks (3 min) • Exercise – Configure a resource lock (15 min) • Describe the purpose of the Service Trust portal (3 min) • Knowledge check (4 min) • Summary (2 min)

Title	Objectives
	<ul style="list-style-type: none"> • Module 3: Describe Features and Tools for Managing and Deploying Azure Resources <ul style="list-style-type: none"> • Introduction (1 min) • Describe tools for interacting with Azure (5 min) • Describe the purpose of Azure arc (3 min) • Describe Azure resource manager and Azure ARM templates (6 min) • Knowledge check (3 min) • Summary (2 min) • Module 4: Describe Monitoring Tools in Azure <ul style="list-style-type: none"> • Introduction (1 min) • Describe the purpose of Azure advisor (2 min) • Describe Azure service health (2 min) • Describe Azure monitor (3 min) • Knowledge check (3 min) • Summary (2 min)

3.2 Microsoft Azure AI Fundamentals



A. Deskripsi singkat:

Kursus pelatihan Microsoft Azure AI Fundamentals diselenggarakan oleh perusahaan teknologi terkemuka, yaitu Microsoft. Pada pelatihan ini Anda berkesempatan untuk mempelajari pengetahuan tentang konsep pembelajaran mesin (Machine Learning) dan kecerdasan buatan (AI), serta layanan Microsoft Azure yang terkait.



B. Keuntungan mengikuti pelatihan dan sertifikasi:

- a. CV yang menarik karena pelatihan dan sertifikasi berstandar internasional
- b. Karir yang fleksibel dan mudah
- c. Gaji yang meningkat



C. Modul:

Title	Objectives
Learning Path 1: <u>Get Started with Artificial Intelligence</u>	<ul style="list-style-type: none"> • Module 1: Get Started with AI on Azure <ul style="list-style-type: none"> • Introduction to AI (3 min) • Understand machine learning (3 min) • Understand anomaly detection (3 min) • Understand computer vision (3 min) • Understand natural language processing (3 min) • Understand knowledge mining (3 min) • Challenge and risks with AI (3 min) • Understand responsible AI (10 min) • Knowledge check (2 min)

Title	Objectives
	<ul style="list-style-type: none"> • Summary (1 min) • Module 2: Introduction to Azure OpenAI Service <ul style="list-style-type: none"> • Introduction (3 min) • What is generative AI (3 min) • Describe Azure OpenAI (5 min) • How to use Azure OpenAI (3 min) • Understand OpenAI's natural language capabilities (5 min) • Understand OpenAI's code generation capabilities (6 min) • Understand OpenAI's image generation capabilities (5 min) • Describe Azure OpenAI's access and responsible AI policies (3 min) • Knowledge check (4 min) • Summary (1 min)
<p>Learning Path 2: <u>Explore Visual Tools for Machine Learning</u></p>	<ul style="list-style-type: none"> • Module 1: Use Automated Machine Learning in Azure Machine Learning <ul style="list-style-type: none"> • Introduction (1 min) • What is machine learning? (5 min) • What is Azure machine learning studio? (5 min) • What is Azure automated machine learning? (3 min) • Understand the AutoML process (5 min) • Exercise – Explore automated machine learning in Azure ML (50 min) • Knowledge check (4 min) • Summary (1 min) • Module 2: Create a Regression Model with Azure Machine Learning Designer <ul style="list-style-type: none"> • Introduction (2 min) • Identify regression machine learning scenarios (3 min) • What is Azure machine learning? (5 min) • What is Azure machine learning designer? (4 min) • Understand steps for regression (6 min) • Exercise – Explore regression with Azure machine learning designer (55 min) • Knowledge check (3 min) • Summary (2 min) • Module 3: Create a Classification Model with Azure Machine Learning Designer <ul style="list-style-type: none"> • Introduction (2 min) • Identify classification machine learning scenarios (3 min) • What is Azure machine learning? (4 min) • What is Azure machine learning designer? (6 min) • Understand steps for classification (8 min) • Exercise – Explore classification with Azure machine learning designer (60 min) • Knowledge check (3 min) • Summary (1 min) • Module 4: Create a Clustering Model with Azure Machine Learning Designer <ul style="list-style-type: none"> • Introduction (2 min) • Identify clustering machine learning scenarios (2 min) • What is Azure machine learning? (3 min)

Title	Objectives
	<ul style="list-style-type: none"> • What is Azure machine learning designer? (5 min) • Understand steps for clustering (6 min) • Exercise – Explore clustering with Azure machine learning designer (55 min) • Knowledge check (3 min) • Summary (1 min)
<p>Learning Path 3: <u>Explore Computer Vision</u></p>	<ul style="list-style-type: none"> • Module 1: Analyze Images with the Computer Vision Service <ul style="list-style-type: none"> • Introduction (2 min) • Get started with image analysis on Azure (3 min) • Exercise – Explore computer vision (20 min) • Knowledge check (2 min) • Summary (1 min) • Module 2: Classify Images with the Custom Vision Service <ul style="list-style-type: none"> • Introduction (3 min) • Understand classification (3 min) • Get started with image classification on Azure (3 min) • Exercise – Explore image classification (25 min) • Knowledge check (2 min) • Summary (1 min) • Module 3: Detect Objects in Images with the Custom Vision Service <ul style="list-style-type: none"> • Introduction (3 min) • What is object detection? (3 min) • Get started with object detection on Azure (3 min) • Exercise – Explore object detection (30 min) • Knowledge check (2 min) • Summary (1 min) • Module 4: Detect and Analyze Faces with the Face Service <ul style="list-style-type: none"> • Introduction (3 min) • Get started with Face Analysis on Azure (3 min) • Exercise – Explore face detection (15 min) • Knowledge check (2 min) • Summary (1 min) • Module 5: Read Text with the Computer Vision Service <ul style="list-style-type: none"> • Introduction (3 min) • Get started with the Read API on Azure (3 min) • Exercise – Explore optical character recognition with the Read API (15 min) • Knowledge check (2 min) • Summary (1 min) • Module 6: Analyze Receipts with the Form Recognizer Service <ul style="list-style-type: none"> • Introduction (3 min) • Get started with receipt analysis on Azure (3 min) • Exercise – Explore form recognition (15 min) • Knowledge check (2 min) • Summary (1 min)
<p>Learning Path 4:</p>	<ul style="list-style-type: none"> • Module 1: Analyze Text with the Language Service <ul style="list-style-type: none"> • Introduction (3 min)

Title	Objectives
<u>Explore Natural Language Processing</u>	<ul style="list-style-type: none"> • Get started with text analysis (10 min) • Exercise – Explore text analytics (20 min) • Knowledge check (2 min) • Summary (1 min) • Module 2: Recognize and Synthesize Speech <ul style="list-style-type: none"> • Introduction (3 min) • Get started with speech on Azure (3 min) • Exercise – Explore speech (20 min) • Knowledge check (2 min) • Summary (1 min) • Module 3: Translate Text and Speech <ul style="list-style-type: none"> • Introduction (3 min) • Get started with translation in Azure (3 min) • Exercise – Explore translation (20 min) • Knowledge check (2 min) • Summary (1 min) • Module 4: Create a Language Model with Conversational Language Understanding <ul style="list-style-type: none"> • Introduction (3 min) • Getting started with conversational language understanding (3 min) • Exercise – Explore language understanding (30 min) • Knowledge check (2 min) • Summary (1 min) • Module 5: Build a Bot with the Language Service and Azure Bot Service <ul style="list-style-type: none"> • Introduction (3 min) • Get started with the language service and Azure bot service (3 min) • Exercise – Explore question answering (20 min) • Knowledge check (2 min) • Summary (1 min)
Learning Path 5: <u>Explore Decision Support</u>	<ul style="list-style-type: none"> • Module 1: Introduction to Anomaly Detector <ul style="list-style-type: none"> • Introduction (2 min) • What is anomaly detector? (5 min) • How anomaly detector works (10 min) • When to use anomaly detector (5 min) • Exercise – Explore cognitive services (3 min) • Knowledge check (10 min) • Summary (3 min)

3.3 Microsoft Power Platform Fundamentals



A. Deskripsi singkat:

Kursus pelatihan Microsoft Power Platform Fundamentals diselenggarakan oleh perusahaan teknologi terkemuka, yaitu Microsoft. Pada pelatihan ini, Anda berkesempatan untuk mempelajari pengetahuan tentang nilai bisnis dan kemampuan produk Microsoft Power Platform. Membuat Power Apps sederhana, menyambungkan data dengan Microsoft Dataverse, membuat Dasbor Power BI,

mengotomatisasi proses dengan Power Automate, atau membuat chatbot dengan Power Virtual Agents.



B. Keuntungan mengikuti pelatihan dan sertifikasi:

- CV yang menarik karena pelatihan dan sertifikasi berstandar internasional
- Karir yang fleksibel dan mudah
- Gaji yang meningkat



C. Modul:

Title	Objectives
<p>Learning Path 1:</p> <p><u>PL-900: Microsoft Power Platform Fundamentals</u></p>	<ul style="list-style-type: none"> Module 1: Describe the Business Value of the Microsoft Power Platform <ul style="list-style-type: none"> Introduction (2 min) Explore Microsoft Power Platform (5 min) Describe the business value of the Power Platform (7 min) Explore connectors and Microsoft Dataverse (7 min) Describe how Power Platform works with Microsoft 365 apps and services (3 min) Explore how Power Platform works with Microsoft Teams (5 min) Describe how Power Platform works with Microsoft Dynamics 365 apps (3 min) Describe how Power Platform solutions consume Microsoft azure services (3 min) Explore how Microsoft Power Platform apps work together (9 min) Knowledge check (3 min) Summary (3 min) Module 2: Identify Foundational Components of Microsoft Power Platform <ul style="list-style-type: none"> Introduction (3 min) Describe Power Platform administration (13 min) Describe Power Platform security and governance (5 min) Explore Microsoft dataverse (14 min) Examine Power Platform connectors (7 min) Exercise – Build a basic dataverse data model (15 min) Knowledge check (3 min) Summary (3 min) Module 3: Describe How to Build Applications with Microsoft Power Apps <ul style="list-style-type: none"> Introduction (3 min) Describe Power Apps (3 min) Explore canvas applications (5 min) Explore model-driven applications (3 min) Differentiate between canvas apps and model-driven apps (16 min) Build a basic canvas app (10 min)

Title	Objectives
	<ul style="list-style-type: none"> • Exercise: Build a canvas app (20 min) • Build a basic model-driven app (8 min) • Exercise: Build a basic model-driven app (20 min) • Knowledge check (3 min) • Summary (3 min) • Module 4: Describe Building Automation with Microsoft Power Automate <ul style="list-style-type: none"> • Introduction (3 min) • Describe the capabilities of Power Automate (18 min) • Explore the different Power Automate apps (6 min) • Describe the components of a cloud flow (5 min) • Consider Power Automate scenarios (11 min) • Build a basic Power Automate cloud flow (9 min) • Build a desktop flow (12 min) • Exercise: Build a basic Power Automate flow (15 min) • Describe the business value of Power Automate (3 min) • Knowledge check (3 min) • Summary (3 min) • Module 5: Describe the Capabilities of Microsoft Power BI <ul style="list-style-type: none"> • Introduction (3 min) • Describe using Power BI to build data-driven analytics (3 min) • Explore the different Power BI elements (8 min) • Describe cleaning and transforming data (4 min) • Describe using AI insights to spot trends and anomalies (7 min) • Build a basic dashboard (12 min) • Consider the business value of Power BI (5 min) • Knowledge check (3 min) • Summary (3 min) • Module 6: Describe Complementary Microsoft Power Platform Solutions <ul style="list-style-type: none"> • Introduction (3 min) • Describe Power Virtual Agents (11 min) • Build a basic chatbot (10 min) • Explore power pages (5 min) • Describe the business value of power pages (3 min) • Build a power pages site (5 min) • Describe AI builder (7 min) • Knowledge check (3 min) • Summary (3 min)

3.4 Microsoft Dynamics 365 Fundamentals (CRM)



A. Deskripsi singkat:

Kursus pelatihan Microsoft Dynamics 365 Fundamentals diselenggarakan oleh perusahaan teknologi terkemuka, yaitu Microsoft. Pada pelatihan ini, Anda berkesempatan untuk mempelajari

pengetahuan tentang aplikasi ketrlibatan pelanggan di Microsoft Dynamics 365, termasuk kemampuan pemasaran, dan otomatisasi siklus hidup penjualan, layanan, dan *support*.



B. Keuntungan mengikuti pelatihan dan sertifikasi:

- CV yang menarik karena pelatihan dan sertifikasi berstandar internasional
- Karir yang fleksibel dan mudah
- Gaji yang meningkat



C. Modul:

Title	Objectives
Learning Path 1: <u>Explore the Core Capabilities of Microsoft Dynamics 365 Customer Engagement Apps</u>	<ul style="list-style-type: none"> • Module 1: Describe the Foundation of Dynamics 365 Customer Engagement Apps <ul style="list-style-type: none"> • Introduction (2 min) • Describe customer relationship management (3 min) • Describe Microsoft power platform and Dynamics 365 customer engagement apps (3 min) • Describe Microsoft dataverse and Dynamics 365 customer engagement apps (3 min) • Describe use cases for Dynamics 365 customer engagement apps (7 min) • Navigate to and within Dynamics 365 customer engagement apps (5 min) • Knowledge check (3 min) • Summary (3 min) • Module 2: Describe Shared Activities and Integration Options in Dynamics 365 Customer Engagement Apps <ul style="list-style-type: none"> • Introduction (2 min) • Describe customers and activities (4 min) • Exercise: Manage customers and activities (15 min) • Describe search criteria and filters (3 min) • Describe reporting capabilities including charts, dashboards, and views (8 min) • Describe excel integrations (3 min) • Describe Microsoft Teams integration (3 min) • Describe outlook integration (3 min) • Knowledge check (3 min) • Summary (3 min)
Learning Path 2: <u>Explore the Fundamentals of Microsoft Dynamics 365 Marketing</u>	<ul style="list-style-type: none"> • Module 1: Explore Dynamics 365 Marketing <ul style="list-style-type: none"> • Introduction (2 min) • Describe use cases for Dynamics 365 marketing (8 min) • Explore a Dynamics 365 marketing business scenario (7 min) • Describe email marketing (2 min) • Describe how to target customers by using marketing lists and segments (10 min) • Describe customer journeys (6 min) • Describe lead generation and qualification (4 min) • Describe use cases for marketing forms (3 min)

Title	Objectives
	<ul style="list-style-type: none"> Describe event management features and capabilities (3 min) Knowledge check (3 min) Summary (3 min) Module 2: Describe Dynamics 365 Marketing Apps <ul style="list-style-type: none"> Introduction (2 min) Explore a Dynamics 365 marketing related apps business scenario (9 min) Describe use cases for and capabilities of Dynamics 365 customer insights (8 mi) Describe use cases for and capabilities of Dynamics 365 customer voice (10 min) Knowledge check (3 min) Summary (3 min)
<p>Learning Path 3: <u>Explore the Fundamentals of Microsoft Dynamics 365 Sales</u></p>	<ul style="list-style-type: none"> Module 1: Explore Dynamics 365 Sales <ul style="list-style-type: none"> Introduction (2 min) Describe use cases for Dynamics 365 sales (6 min) Review the sales lifecycle (3 min) Explore a Dynamics 365 sales business scenario (8 min) Describe leads and the process for qualifying leads (12 min) Describe the opportunity management process (4 min) Exercise: Lab: Work with leads and opportunities (15 min) Describe Dynamics 365 sales business process flows (11 min) Describe sales order processing (6 min) Knowledge check (3 min) Summary (3 min) Module 2: Describe Dynamics 365 Sales Capabilities and Related Apps <ul style="list-style-type: none"> Introduction (3 min) Identify additional Dynamics 365 sales capabilities and related apps (3 min) Explore a Dynamic 365 sales related apps business scenario (7 min) Describe sales pipeline and forecasting concepts (3 min) Describe use cases for and capabilities of sales insights (13 min) Describe use cases for and capabilities of LinkedIn sales navigator (6 min) Describe the Dynamics 365 sales mobile app (8 min) Describe viva sales (3 min) Knowledge check (3 min) Summary (3 min)
<p>Learning Path 4: <u>Explore the Fundamentals of Microsoft Dynamics 365 Customer Service</u></p>	<ul style="list-style-type: none"> Module 1: Explore Dynamics 365 Customer Service <ul style="list-style-type: none"> Introduction (2 min) Describe use cases for Dynamics 365 customer service (6 min) Explore a Dynamics 365 customer service business scenario (8 min) Describe the case lifecycle including service-level agreements (SLAs) and entitlements (5 min)

Title	Objectives
	<ul style="list-style-type: none"> Describe the functionality for workload management (5 min) Describe Dynamics 365 customer service business process flows (4 min) Describe knowledge management in Dynamics 365 customer service (3 min) Knowledge check (3 min) Summary and resources (3 min) Module 2: Describe Dynamics 365 Customer Service Capabilities and Related Apps <ul style="list-style-type: none"> Introduction (3 min) Explore a Dynamics 365 customer service-related apps business scenario (8 min) Describe omnichannel for customer service (12 min) Describe reporting and data visualization options in Dynamics 365 customer service (5 min) Describe Dynamics customer voice use cases for customer service (8 min) Knowledge check (3 min) Summary and resources (3 min)
<p>Learning Path 5: <u>Explore the Fundamentals of Microsoft Dynamics 365 Field Service</u></p>	<ul style="list-style-type: none"> Module 1: Explore Dynamics 365 Field Service <ul style="list-style-type: none"> Introduction (2 min) Describe use cases for Dynamics 365 field service (5 min) Explore a Dynamics 365 field service business scenario (4 min) Describe the work order lifecycle (12 min) Describe inspections in Dynamics 365 field service (8 min) Describe the Dynamics 365 field service mobile app (9 min) Knowledge check (3 min) Summary and resources (3 min) Module 2: Describe Dynamics 365 Field Service Scheduling Capabilities and Related Apps <ul style="list-style-type: none"> Introduction (2 min) Describe resource and scheduling processes (8 min) Explore a Dynamics 365 field service-related apps business scenario (8 min) Describe asset management and customer assets (4 min) Describe connected field service for Dynamics 365 (9 min) Knowledge check (3 min) Summary and resources (3 min)

3.5 Microsoft Security, Compliance, and Identity Fundamentals



A. Deskripsi singkat:

Kursus pelatihan Microsoft *Security, Compliance, and Identity Fundamentals* diselenggarakan oleh perusahaan teknologi terkemuka, yaitu Microsoft. Pada pelatihan ini, Anda berkesempatan untuk mempelajari pengetahuan tentang sertifikasi berbasis peran dalam operasi keamanan, manajemen identitas dan akses, serta perlindungan informasi.



B. Keuntungan mengikuti pelatihan dan sertifikasi:

- CV yang menarik karena pelatihan dan sertifikasi berstandar internasional
- Karir yang fleksibel dan mudah
- Gaji yang meningkat



C. Modul:

Title	Objectives
Learning Path 1: <u>Describe the Concepts of Security, Compliance, and Identity</u>	<ul style="list-style-type: none">• Module 1: Describe the Security and Compliance Concepts<ul style="list-style-type: none">• Introduction (1 min)• Describe the shared responsibility model (3 min)• Describe defense in depth (4 min)• Describe the zero-trust model (5 min)• Describe encryption and hashing (4 min)• Describe compliance concepts (2 min)• Knowledge check (3 min)• Summary and resources (1 min)• Module 2: Describe Identity Concepts<ul style="list-style-type: none">• Introduction (1 min)• Define authentication and authorization (2 min)• Define identity as the primary security perimeter (3 min)• Describe the role of the identity provider (7 min)• Describe the concept of directory services and active directory (2 min)• Describe the concept of federation (2 min)• Knowledge check (2 min)• Summary and resources (1 min)
Learning Path 2: <u>Describe the Capabilities of Microsoft Azure Active Directory, Part of Microsoft Entra</u>	<ul style="list-style-type: none">• Module 1: Describe the Services and Identity Types of Azure AD<ul style="list-style-type: none">• Introduction (1 min)• Describe Azure active directory (2 min)• Describe the available Azure AD editions (2 min)• Describe Azure AD identity types (8 min)• Describe the types of external identities (3 min)• Describe the concept of hybrid identity (6 min)• Knowledge check (3 min)• Summary and resources (1 min)

Title	Objectives
	<ul style="list-style-type: none"> • Module 2: Describe the Authentication Capabilities of Azure AD <ul style="list-style-type: none"> • Introduction (1 min) • Describe the authentication methods available in Azure AD (10 min) • Describe multi-factor authentication (MFA) in Azure AD (3 min) • Describe self-service password reset (SSPR) in Azure AD (6 min) • Describe password protection and management capabilities of Azure AD (4 min) • Knowledge check (2 min) • Summary and resources (1 min) • Module 3: Describe the Access Management Capabilities of Azure AD <ul style="list-style-type: none"> • Introduction (1 min) • Describe conditional access in Azure AD (9 min) • Describe the benefits of Azure AD roles and role-based access control (7 min) • Knowledge check (2 min) • Summary and resources (1 min) • Module 4: Describe the Identity Protection and Governance Capabilities of Azure AD <ul style="list-style-type: none"> • Introduction (1 min) • Describe identity governance in Azure AD (4 min) • Describe what is entitlement management and access reviews (8 in) • Describe the capabilities of privileged identity management (8 min) • Describe Azure identity protection (3 min) • Knowledge check (2 min) • Summary and resources (1 min)
<p>Learning Path 3: <u>Describe the Capabilities of Microsoft Security Solutions</u></p>	<ul style="list-style-type: none"> • Module 1: Describe Basic Security Capabilities in Azure <ul style="list-style-type: none"> • Introduction (1 min) • Describe Azure DDoS protection (4 min) • Describe Azure firewall (2 min) • Describe web application firewall (1 min) • Describe network segmentation in Azure (2 min) • Describe Azure network security groups (6 min) • Describe Azure bastion and JIT access (6 min) • Describe ways Azure encrypts data (3 min) • Knowledge check (3 min) • Summary and resources (1 min) • Module 2: Describe Security Management Capabilities of Azure <ul style="list-style-type: none"> • Introduction (1 min) • Describe cloud security posture management (2 min) • Describe Microsoft defender for cloud (6 min) • Describe the enhanced security of Microsoft defender for cloud (5 min) • Describe the Microsoft cloud security benchmark and security baselines for Azure (5 min) • Knowledge check (2 min) • Summary and resources (1 min)

Title	Objectives
	<ul style="list-style-type: none"> • Module 3: Describe Security Capabilities of Microsoft Sentinel <ul style="list-style-type: none"> • Introduction (1 min) • Define the concepts of SIEM and SOAR (1 min) • Describe how Microsoft sentinel provides integrated threat management (13 min) • Understand sentinel costs (1 min) • Knowledge check (1 min) • Summary and resources (1 min) • Module 4: Describe Threat Protection with Microsoft 365 Defender <ul style="list-style-type: none"> • Introduction (1 min) • Describe Microsoft 365 defender services (6 min) • Describe Microsoft defender for office 365 (4 min) • Describe Microsoft defender for endpoint (3 min) • Describe Microsoft defender for cloud apps (11 min) • Describe Microsoft defender for identity (3 min) • Describe the Microsoft 365 defender portal (10 min) • Knowledge check (3 min) • Summary and resources (1 min)
<p>Learning Path 4: <u>Describe the Capabilities of Microsoft Compliance Solutions</u></p>	<ul style="list-style-type: none"> • Module 1: Describe the Trust Portal and Privacy at Microsoft <ul style="list-style-type: none"> • Introduction (1 min) • Describe the service trust portal (7 min) • Describe Microsoft's privacy principles (4 min) • Describe Microsoft privacy (3 min) • Knowledge check (2 min) • Summary and resources (1 min) • Module 2: Describe the Compliance Management Capabilities in Microsoft Purview <ul style="list-style-type: none"> • Introduction (1 min) • Describe the Microsoft Purview compliance portal (7 min) • Describe compliance manager (10 min) • Describe use and benefits of compliance score (3 min) • Knowledge check (3 min) • Summary and resources (1 min) • Module 3: Describe Information Protection and Data Lifecycle Management in Microsoft Purview <ul style="list-style-type: none"> • Introduction (1 min) • Know your data, protect your data, and govern your data (2 min) • Describe the data classification capabilities of the compliance portal (11 min) • Describe sensitivity labels and policies (5 min) • Describe data loss prevention (5 min) • Describe retention policies and retention labels (3 min) • Describe records management (3 min) • Knowledge check (4 min) • Summary and resources (1 min) • Module 4: Describe Insider Risk Capabilities in Microsoft Purview <ul style="list-style-type: none"> • Introduction (1 min) • Describe insider risk management (4 min)

Title	Objectives
	<ul style="list-style-type: none"> Describe communication compliance (10 min) Describe information barriers (3 min) Knowledge check (2 min) Summary and resources (1 min) Module 5: Describe the eDiscovery and Audit Capabilities of Microsoft Purview <ul style="list-style-type: none"> Introduction (1 min) Describe the eDiscovery solutions in Microsoft Purview (3 min) Describe the audit solutions in Microsoft Purview (3 min) Knowledge check (3 min) Summary and resources (1 min) Module 6: Describe Resource Governance Capabilities in Azure <ul style="list-style-type: none"> Introduction (1 min) Describe Azure policy (3 min) Describe the use of Azure blueprints (1 min) Describe the capabilities in the Microsoft Purview governance portal (3 min) Knowledge check (2 min) Summary and resources (1 min)

3.6 Microsoft Dynamics 365 Fundamentals (ERP)



A. Deskripsi singkat:

Kursus pelatihan Microsoft Dynamics 365 Fundamentals (ERP) diselenggarakan oleh perusahaan teknologi terkemuka, yaitu Microsoft. Pada pelatihan ini, Anda berkesempatan untuk mempelajari pengetahuan tentang aplikasi keuangan dan operasi Dynamics 365 – khususnya bagaimana tim operasi dan keuangan bisnis dapat memanfaatkan pengetahuan ini untuk mencapai tingkat efisiensi dan efektivitas baru di seluruh perusahaan.



B. Keuntungan mengikuti pelatihan dan sertifikasi:

- CV yang menarik karena pelatihan dan sertifikasi berstandar internasional
- Karir yang fleksibel dan mudah
- Gaji yang meningkat



C. Modul:

Title	Objectives
Learning Path 1: <u>Explore the Core Capabilities of Dynamics</u>	<ul style="list-style-type: none"> Module 1: Describe the Finance and Operations Apps <ul style="list-style-type: none"> Introduction (2 min) Describe enterprise resource planning (ERP)

Title	Objectives
<u>365 Finance and Operations Apps</u>	<ul style="list-style-type: none"> Describe finance and operations apps use cases (5 min) Describe finance and operations apps user interfaces (13 min) Exercise: Navigate the finance and operations apps (15 min) Knowledge check (3 min) Summary and resources (5 min) Module 2: Create Reports and Integrate Finance and Operations Apps <ul style="list-style-type: none"> Introduction (3 min) Create and use reports, including workspaces (5 min) Explore options for analyzing data with Power BI (5 min) Explore options for manipulating data from within Excel (3 min) Explore other integration capabilities (3 min) Exercise: Excel integration (10 min) Knowledge check (3 min) Summary and resources (3 min)
Learning Path 2: <u>Learn the Fundamentals of Dynamics 365 Finance</u>	<ul style="list-style-type: none"> Module 1: Describe Dynamics 365 Finance Core Capabilities <ul style="list-style-type: none"> Introduction (1 min) Describe finance capabilities and features (13 min) Describe organization and legal entities (3 min) Describe number sequence functionality (10 min) Describe tax capabilities (10 min) Describe cost accounting concepts (4 min) Knowledge check (3 min) Summary and resources (5 min) Module 2: Explore General Ledger in Microsoft Dynamics 365 Finance <ul style="list-style-type: none"> Introduction (1 min) Identify charts of accounts (4 min) Explore financial dimensions and dimension set concepts (3 min) Explore periodic financial processes demo: Month end closing (10 min) Exercise: Create a main account (15 min) Knowledge check (2 min) Summary and resources (1 min) Module 3: Describe Account Payable and Account Receivable in Dynamics 365 Finance <ul style="list-style-type: none"> Introduction (1 min) Describe core accounts payable components (12 min) Describe vendor payments and settlements (14 min) Describe core accounts receivable components (4 min) Describe credit and collection processes (4 min) Describe revenue recognition (3 min) Knowledge check (3 min) Summary and resources (5 min) Module 4: Explore Expense Management, Fixed Asset Management, and Budgeting in Dynamics 365 Finance <ul style="list-style-type: none"> Introduction (1 min) Describe cash and bank management concepts (4 min) Describe expense management (10 min)

Title	Objectives
	<ul style="list-style-type: none"> • Describe fixed asset management (5 min) • Describe budgeting capabilities (9 min) • Knowledge check (2 min) • Summary and resources (5 min)
<p>Learning Path 3: <u>Learn the Fundamentals of Dynamics 365 Supply Chain Management</u></p>	<ul style="list-style-type: none"> • Module 1: Identify General Capabilities of Dynamics 365 Supply Chain Management <ul style="list-style-type: none"> • Introduction (1 min) • Overview of supply chain module (3 min) • Explore product master records and product variants (5 min) • Exercise: Create a new product (10 min) • Explore trade agreements and discounts (5 min) • Knowledge check (2 min) • Summary and resources (1 min) • Module 2: Explore Warehouse and Inventory Capabilities <ul style="list-style-type: none"> • Introduction (1 min) • Explore costing methods (15 min) • Explore use cases for Warehouse Management System (WMS) in production environments (3 min) • Explore purchase orders, item arrival journals, and cross-docking (3 min) • Explore inventory reservations, picking and packing, replenishment, and shipments (3 min) • Explore inventory counting and inventory on-hand concepts (5 min) • Explore quality management capabilities (5 min) • Explore warehouse configuration options (5 min) • Exercise: Create a purchase order (10 min) • Exercise: Create a counting journal (10 min) • Knowledge check (2 min) • Summary and resources (1 min) • Module 3: Describe Manufacturing Strategies in Dynamics 365 Supply Chain Management <ul style="list-style-type: none"> • Introduction (1 min) • Describe manufacturing types (3 min) • Describe manufacturing strategies (3 min) • Describe the production elements of a production process (8 min) • Describe item tracking and tracing processes (5 min) • Describe manufacturing execution (7 min) • Describe master planning and planning optimization (13 min) • Exercise: Create a production order (10 min) • Knowledge check (3 min) • Summary and resources (5 min)
<p>Learning Path 4: <u>Learn the Fundamentals of Dynamics 365 Commerce</u></p>	<ul style="list-style-type: none"> • Module 1: Explore Dynamics 365 Commerce Capabilities <ul style="list-style-type: none"> • Introduction (1 min) • Describe commerce capabilities (3 min) • Explore Dynamics 365 commerce channels (5 min) • Explore channel management concepts (3 min) • Explore distributed order management (DOM)

Title	Objectives
	<ul style="list-style-type: none"> Describe price and discount (3 min) Explore product assortments (12 min) Exercise: Create a product assortment (10 min) Knowledge check (2 min) Summary and resources (1 min) Module 2: Describe Dynamics 365 Commerce Clienteling Capabilities and Dynamics 365 Fraud Protection <ul style="list-style-type: none"> Introduction (2 min) Describe loyalty programs (8 min) Describe how to create personalized customer experiences by using clienteling (8 min) Describe fraud protection (5 min) Knowledge check (3 min) Summary and resources (5 min)
<p>Learning Path 5: <u>Learn the Fundamentals of Microsoft Dynamics 365 Human Resources</u></p>	<ul style="list-style-type: none"> Module 1: Describe Dynamics 365 Human Resources Core Capabilities <ul style="list-style-type: none"> Introduction (2 min) Describe use cases of Dynamics 365 Human Resources (3 min) Describe workers and positions (2 min) Describe the hire-to-retain process (5 min) Describe compensation and benefits capabilities (4 min) Describe leave and absence capabilities (2 min) Describe compliance features (9 min) Knowledge check (3 min) Summary and resources (5 min) Module 2: Describe Personnel Management Capabilities in Dynamics 365 Human Resources <ul style="list-style-type: none"> Introduction (1 min) Describe self-service capabilities (9 min) Describe employee training and certification features (9 min) Describe performance management capabilities (7 min) Knowledge check (3 min) Summary and resources (3 min)
<p>Learning Path 6: <u>Learn the Fundamentals of Dynamics 365 Project Operations</u></p>	<ul style="list-style-type: none"> Module 1: Identify Project Life Cycle Management Capabilities in Dynamics 365 Project Operations <ul style="list-style-type: none"> Introduction (1 min) Explore project-based services and project types (3 min) Manage projects across industries (2 min) Analyze the project lifecycle (project phases) (5 min) Explore project sales capabilities (2 min) Explore project contract capabilities (15 min) Describe project pricing capabilities (5 min) Knowledge check (2 min) Summary (1 min) Module 2: Explore the Project Planning and Execution Capabilities of 365 Project Operations <ul style="list-style-type: none"> Introduction (1 min) Project planning capabilities (3 min) Project execution and analysis capabilities (3 min) Create and manage work breakdown structures (8 min)

Title	Objectives
	<ul style="list-style-type: none"> • Explore the project invoicing capabilities (5 min) • Explore project cost tracking capabilities (3 min) • Knowledge check (2 min) • Summary (1 min)

3.7 Microsoft Azure Data Fundamentals



A. Deskripsi singkat:

Kursus pelatihan Microsoft Azure Data Fundamentals diselenggarakan oleh perusahaan teknologi terkemuka, yaitu Microsoft. Pada pelatihan ini, Anda berkesempatan untuk mempelajari pengetahuan tentang data di cloud, menguasai pengetahuan dasar-dasar data dapat membantu Anda memulai karir dan mempersiapkan Anda untuk terjun lebih dalam ke peluang teknis lain yang ditawarkan Azure.



B. Keuntungan mengikuti pelatihan dan sertifikasi:

- a. CV yang menarik karena pelatihan dan sertifikasi berstandar internasional
- b. Karir yang fleksibel dan mudah
- c. Gaji yang meningkat



C. Modul:

Title	Objectives
Learning Path 1: <u>Explore Core Data Concepts</u>	<ul style="list-style-type: none"> • Module 1: Describe the Business Value of the Microsoft Power Platform <ul style="list-style-type: none"> • Introduction (1 min) • Identify data formats (5 min) • Explore file storage (5 min) • Explore databases (5 min) • Explore transactional data processing (5 min) • Explore analytical data processing (5 min) • Knowledge check (3 min) • Summary (1 min) • Module 2: Explore Data Roles and Services <ul style="list-style-type: none"> • Introduction (1 min) • Explore job roles in the world of data (5 min) • Identify data services (5 min) • Knowledge check (3 min) • Summary (1 min)
Learning Path 2: <u>Explore Relational Data in Azure</u>	<ul style="list-style-type: none"> • Module 1: Explore Fundamental Relational Data Concepts <ul style="list-style-type: none"> • Introduction (2 min)

Title	Objectives
	<ul style="list-style-type: none"> • Understand relational data (6 min) • Understand normalization (6 min) • Explore SQL (10 min) • Describe database objects (9 min) • Knowledge check (3 min) • Summary (1 min) • Module 2: Explore Relational Database Services in Azure <ul style="list-style-type: none"> • Introduction (1 min) • Describe Azure SQL services and capabilities (10 min) • Describe Azure services for open-source databases (6 min) • Exercise: Explore Azure relational database services (15 min) • Knowledge check (3 min) • Summary (1 min)
<p>Learning Path 3: <u>Explore Non-Relational Data in Azure</u></p>	<ul style="list-style-type: none"> • Module 1: Explore Azure Storage for Non-Relational Data <ul style="list-style-type: none"> • Introduction (1 min) • Explore Azure blob storage (4 min) • Explore Azure DataLake storage gen2 (3 min) • Explore Azure files (3 min) • Explore Azure tables (8 min) • Exercise: Explore Azure storage (15 min) • Knowledge check (3 min) • Summary (1 min) • Module 2: Explore Fundamentals of Azure Cosmos DB <ul style="list-style-type: none"> • Introduction (1 min) • Describe Azure Cosmos DB (5 min) • Identify Azure Cosmos DB APIs (6 min) • Exercise: Explore Azure Cosmos DB (15 min) • Knowledge check (3 min) • Summary (1 min)
<p>Learning Path 4: <u>Explore Data Analytics in Azure</u></p>	<ul style="list-style-type: none"> • Module 1: Explore Fundamentals of Large-Scale Data Warehousing <ul style="list-style-type: none"> • Introduction (1 min) • Describe data warehousing architecture (3 min) • Explore data ingestion pipelines (5 min) • Explore analytical data stores (8 min) • Exercise: Explore data analytics in Azure with Azure Synapse Analytics (30 min) • Knowledge check (3 min) • Summary (1 min) • Module 2: Explore Fundamentals of Real-Time Analytics <ul style="list-style-type: none"> • Introduction (1 min) • Understand batch and stream processing (9 min) • Explore common elements of stream processing architecture (4 min) • Explore Azure stream analytics (2 min) • Exercise: Explore Azure stream analytics (15 min) • Explore Apache spark on Microsoft Azure

Title	Objectives
	<ul style="list-style-type: none"> Exercise: Explore spark streaming in Azure Synapse Analytics (15 min) Knowledge check (3 min) Summary (1 min) Module 3: Explore Fundamentals of Data Visualization <ul style="list-style-type: none"> Introduction (1 min) Describe Power BI tools and workflow (3 min) Describe core concepts of data modeling (5 min) Describe considerations for data visualization (5 min) Exercise – Explore fundamentals of data visualization with Power BI (20 min) Knowledge check (3 min) Summary (1 min)

3.8 Microsoft Azure Database Administrator Associate



A. Deskripsi singkat:

Kursus pelatihan Microsoft Azure Database Administrator Associate diselenggarakan oleh perusahaan teknologi terkemuka, yaitu Microsoft. Pada pelatihan ini, Anda berkesempatan untuk mempelajari pengetahuan dan pengalaman dengan Azure SQL Edge, Azure SQL Database, Azure SQL Managed Instance, dan SQL Server di *virtual machine* Azure (Windows dan Linux).



B. Keuntungan mengikuti pelatihan dan sertifikasi:

- CV yang menarik karena pelatihan dan sertifikasi berstandar internasional
- Karir yang fleksibel dan mudah
- Gaji yang meningkat



C. Modul:

Title	Objectives
Learning Path 1: <u>Introduction to Azure Database Administration</u>	<ul style="list-style-type: none"> Module 1: Prepare to Maintain SQL Databases on Azure <ul style="list-style-type: none"> Introduction (1 min) Describe Microsoft intelligent data platform roles (3 min) Understand SQL Server in an Azure virtual machine (4 min) Design Azure SQL database for cloud-native applications (10 min) Explore Azure SQL database managed instance (5 min) Knowledge check (5 min) Summary (3 min)

Title	Objectives
<p>Learning Path 2: <u>Plan and Implement Data Platform Resources</u></p>	<ul style="list-style-type: none"> • Module 1: Deploy IaaS Solutions with Azure SQL <ul style="list-style-type: none"> • Introduction (1 min) • Explain IaaS options to deploy SQL Server in Azure (13 min) • Understand hybrid scenarios (6 min) • Explore performance and security (13 min) • Explain high availability and disaster recovery options (12 min) • Exercise: Provision a SQL Server on an Azure virtual machine (15 min) • Knowledge check (5 min) • Summary (1 min) • Module 2: Deploy PaaS solutions with Azure SQL <ul style="list-style-type: none"> • Introduction (1 min) • Explain PaaS options for deploying SQL Server in Azure (12 min) • Explore single SQL database (6 min) • Deploy SQL database elastic pool (5 min) • Understand SQL database hyperscale (10 min) • Examine SQL managed instance (9 min) • Describe SQL edge (9 min) • Exercise: Deploy an Azure SQL database (20 min) • Knowledge check (5 min) • Summary (1 min) • Module 3: Evaluate Strategies for Migrating to Azure SQL <ul style="list-style-type: none"> • Introduction (1 min) • Understand compatibility level (4 min) • Understand Azure preview features (3 min) • Describe Azure database migration options (8 min) • Knowledge check (5 min) • Summary (1 min) • Module 4: Migrate SQL Workloads to Azure SQL Databases <ul style="list-style-type: none"> • Introduction (3 min) • Choose the right SQL Server instance option in Azure (7 min) • Migrate SQL Server to Azure SQL Database offline (5 min) • Migrate SQL Server to Azure SQL Database online (5 min) • Load and move data to Azure SQL Database (5 min) • Summary (3 min) • Module 5: Migrate SQL Workloads to Azure Managed Instances <ul style="list-style-type: none"> • Introduction (2 min) • Evaluate migration scenarios to SQL Database managed instance (20 min) • Migrate to SQL Database managed instance (25 min) • Load and move data to SQL Database managed instance (15 min) • Summary (2 min)

Title	Objectives
<p>Learning Path 3: <u>Implement a Secure Environment for a Database Service</u></p>	<ul style="list-style-type: none"> • Module 1: Configure Database Authentication and Authorization <ul style="list-style-type: none"> • Introduction (1 min) • Describe active directory and Azure active directory (3 min) • Describe authentication and identities (5 min) • Describe security principals (14 min) • Describe database and object permission (10 min) • Identify authentication and authorization failures (5 min) • Exercise: Authorize access to Azure SQL Database with Azure active directory (15 min) • Knowledge check (5 min) • Summary (1 min) • Module 2: Protect Data in-Transit and at Rest <ul style="list-style-type: none"> • Introduction (1 min) • Explore transparent data encryption (6 min) • Configure server and database firewall rules (4 min) • Explain object encryption and secure enclaves (8 min) • Enable encrypted connections (6 min) • Describe SQL injection (5 min) • Understand Azure key vault (3 min) • Exercise: Configure a server-based firewall role using the Azure portal (8 min) • Knowledge check (5 min) • Summary (1 min) • Module 3: Implement Compliance Controls for Sensitive Data <ul style="list-style-type: none"> • Introduction (1 min) • Explore data classification (5 min) • Explore server and database audit (5 min) • Implement dynamic data masking (7 min) • Implement row level security (8 min) • Understand Microsoft defender for SQL (5 min) • Explore Azure SQL database ledger (7 min) • Implement Azure purview (15 min) • Exercise: Enable Microsoft defender for SQL and data classification (15 min) • Knowledge check (5 min) • Summary (1 min)
<p>Learning Path 4: <u>Monitor and Optimize Operational Resources in Azure SQL</u></p>	<ul style="list-style-type: none"> • Module 1: Describe Performance Monitoring <ul style="list-style-type: none"> • Introduction (1 min) • Describe performance monitoring tools (7 min) • Describe critical performance metrics (10 min) • Establish baseline metrics (8 min) • Explore extended events (12 min) • Describe Azure SQL insights (8 min) • Explore query performance insight (5 min) • Exercise: Isolate problems with monitoring (10 min) • Knowledge check (5 min) • Summary (1 min) • Module 2: Configure SQL Server Resources for Optimal Performance <ul style="list-style-type: none"> • Introduction (1 min)

Title	Objectives
	<ul style="list-style-type: none"> • Explain how to optimize Azure storage for SQL Server virtual machines (12 min) • Describe virtual machine resizing (4 min) • Optimize database storage (5 min) • Control SQL Server resources (7 min) • Knowledge check (5 min) • Summary (1 min) • Module 3: Configure Databases for Optimal Performance <ul style="list-style-type: none"> • Introduction (1 min) • Explore database maintenance checks (7 min) • Describe database scoped configuration options (4 min) • Describe automatic tuning (7 min) • Describe intelligent query processing (6 min) • Exercise: Detect and correct fragmentation issues (15 min) • Knowledge check (5 min) • Summary (1 min)
<p>Learning Path 5: <u>Optimize Query Performance in Azure SQL</u></p>	<ul style="list-style-type: none"> • Module 1: Explore Query Performance Optimization <ul style="list-style-type: none"> • Introduction (1 min) • Understand query plans (11 min) • Explain estimated and actual query plans (13 min) • Describe dynamic management views and functions (3 min) • Explore query store (13 min) • Identify problematic query plans (15 min) • Describe blocking and locking (12 min) • Exercise: Identify and resolve blocking issues (10 min) • Knowledge check (5 min) • Summary (1 min) • Module 2: Explore Performance-Based Design <ul style="list-style-type: none"> • Introduction (1 min) • Describe normalization (13 min) • Choose appropriate data types (4 min) • Design indexes (20 min) • Exercise: Identify database design issues (15 min) • Knowledge check (5 min) • Summary (1 min) • Module 3: Evaluate Performance Improvements <ul style="list-style-type: none"> • Introduction (1 min) • Describe wait statistics (8 min) • Tune and maintain indexes (6 min) • Understand query hints (5 min) • Exercise: Isolate problem areas in poorly performing queries (15 min) • Knowledge check (5 min) • Summary (1 min)
<p>Learning Path 6: <u>Automate Database Tasks for Azure SQL</u></p>	<ul style="list-style-type: none"> • Module 1: Automate Deployment of Database Resources <ul style="list-style-type: none"> • Introduction (1 min) • Describe deployment models in Azure (6 min)

Title	Objectives
	<ul style="list-style-type: none"> Automate deployment by using Azure resource manager templates and bicep (12 min) Automate deployment by using PowerShell (4 min) Automate deployment by using Azure CLI (6 min) Exercise: Deploy an Azure SQL database using an Azure resource manager template (12 min) Knowledge check (5 min) Summary (1 min) Module 2: Create and Manage SQL Agent Jobs <ul style="list-style-type: none"> Introduction (1 min) Create a SQL Server maintenance plan (15 min) Describe task status notifications (7 min) Knowledge check (5 min) Exercise: Create a CPU status alert for a SQL Server (12 min) Summary (1 min) Module 3: Manage Azure PaaS Tasks Using Automation <ul style="list-style-type: none"> Introduction (1 min) Explore elastic jobs (5 min) Understand Azure automation (9 min) Build an automation runbook (6 min) Automate database workflows by using logic apps (3 min) Monitor automated tasks (8 min) Exercise: Deploy an automation runbook to automatically rebuild indexes (15 min) Knowledge check (5 min) Summary (1 min)
<p>Learning Path 7: <u>Plan and Implement a High Availability and Disaster Recovery Environment</u></p>	<ul style="list-style-type: none"> Module 1: Describe High Availability and Disaster Recovery Strategies <ul style="list-style-type: none"> Introduction (1 min) Describe recovery time objective and recovery point objective (10 min) Explore high availability and disaster recovery options (15 min) Describe Azure high availability and disaster recovery features for Azure virtual machines (7 min) Describe high availability and disaster recovery options for PaaS deployments (5 min) Explore an IaaS high availability and disaster recovery solution (11 min) Describe hybrid solutions (4 min) Knowledge check (5 min) Summary (1 min) Module 2: Explore IaaS and PaaS Solutions for High Availability and Disaster Recovery <ul style="list-style-type: none"> Introduction (1 min) Describe failover clusters in Windows server (14 min) Configure Always-on availability groups (13 min) Describe temporal tables in Azure SQL database (2 min) Describe active geo-replication for Azure SQL database (2 min) Explore auto-failover groups for Azure SQL database and Azure SQL managed instance (5 min)

Title	Objectives
	<ul style="list-style-type: none"> • Exercise: Configure geo replication for Azure SQL database • Knowledge check (5 min) • Summary (1 min) • Module 3: Backup and Restore Databases <ul style="list-style-type: none"> • Introduction (1 min) • Back up and restore SQL server running on Azure virtual machines (7 min) • Backup a SQL server virtual machine (9 min) • Backup and restore a database using Azure SQL database (8 min) • Exercise: Backup to URL (10 min) • Knowledge check (5 min) • Summary (1 min)

3.9 Microsoft Office Expert (Exam Only)

Dapat dilihat pada lampiran di bawah.

Excel Expert (Microsoft 365 Apps): Exam MO-211

The Microsoft Office Specialist: Excel Expert Certification demonstrates competency in creating, managing, and distributing professional spreadsheets for a variety of specialized purposes and situations. The exam covers the ability to customize Excel environments to meet project needs and to enhance productivity. Expert workbook examples include custom business templates, multiple-axis financial charts, amortization tables, and inventory schedules.

An individual earning this certification has approximately 150 hours of instruction and hands-on experience with the product, has proven competency at an industry expert-level and is ready to enter into the job market. They can demonstrate the correct application of the principal features of Excel at an expert-level and can complete tasks independently.

Microsoft Office Specialist Program certification exams use a performance-based format testing a candidate's knowledge, skills and abilities using the Microsoft 365 Apps programs:

- Microsoft Office Specialist Program exam task instructions generally do not include the command name. For example, function names are avoided, and are replaced with descriptors. This means candidates must understand the purpose and common usage of the program functionality in order to successfully complete the tasks in each of the projects.
- The Microsoft Office Specialist Program exam format incorporates multiple projects as in the previous version, while using enhanced tools, functions, and features from the latest programs. Describe the benefits and usage of Subscriptions.

Skills Measured

- Manage Workbook Options and Settings
- Manage and Format Data
- Create Advance Formulas and Macros
- Manage Advance Charts and Tables

Microsoft Office Specialist Program is the only official Microsoft-recognized certification program for Microsoft Office globally.

Objective Domains

Manage Workbook Options and Settings

Manage workbooks

- Copy macros between workbooks
- Reference data in other workbooks
- Enable macros in a workbook
- Manage workbook versions

Prepare workbooks for collaboration

- Restrict editing
- Protect worksheets and cell ranges
- Protect workbook structure
- Configure formula calculation options



Excel Expert (Microsoft 365 Apps): Exam MO-211

Manage and Format Data

Fill cells based on existing data

- Fill cells by using Flash Fill
- Fill cells by using advanced Fill Series options
- Generate numeric data by using RANDARRAY()

Format and validate data

- Create custom number formats
- Configure data validation
- Group and ungroup data
- Calculate data by inserting subtotals and totals
- Remove duplicate records

Apply advanced conditional formatting and filtering

- Create custom conditional formatting rules
- Create conditional formatting rules that use formulas
- Manage conditional formatting rules

Create Advanced Formulas and Macros

Perform logical operations in formulas

- Perform logical operations by using nested functions including the IF(), IFS(), SWITCH(), SUMIF(), AVERAGEIF(), COUNTIF(), SUMIFS(), AVERAGEIFS(), COUNTIFS(), MAXIFS(), MINIFS(), AND(), OR(), NOT(), and LET() functions

Look up data by using functions

- Look up data by using the XLOOKUP(), VLOOKUP(), HLOOKUP(), MATCH(), and INDEX() functions

Use advanced date and time functions

- Reference date and time by using the NOW() and TODAY() functions
- Calculate dates by using the WEEKDAY() and WORKDAY() functions

Perform data analysis

- Summarize data from multiple ranges by using the Consolidate feature
- Perform what-if analysis by using Goal Seek and Scenario Manager
- Forecast data by using the AND(), IF(), and NPER() functions
- Calculate financial data by using the PMT() function
- Filter data by using FILTER()
- Sort data by using SORTBY()

Troubleshoot formulas

- Trace precedence and dependence
- Monitor cells and formulas by using the Watch Window
- Validate formulas by using error checking rules
- Evaluate formulas

Create and modify simple macros

- Record simple macros
- Name simple macros
- Edit simple macros

Manage Advanced Charts and Tables

Create and modify advanced charts

- Create and modify dual-axis charts
- Create and modify charts including Box & Whisker, Combo, Funnel, Histogram, Sunburst, and Waterfall charts

Create and modify PivotTables

- Create PivotTables
- Modify field selections and options
- Create slicers
- Group PivotTable data
- Add calculated fields
- Configure value field settings

Create and modify PivotCharts

- Create PivotCharts
- Manipulate options in existing PivotCharts
- Apply styles to PivotCharts
- Drill down into PivotChart details