**Module 1: Introduction to .NET Microservices on Azure**

* **Topic 1**: Title Topic
  + **"Deploy .NET Microservices on Azure"**
  + Subtitle: Scalable, Secure, and Reliable Solutions for Modern Applications
  + Your name (or brand), contact info, and session agenda.
* **Topic 2**: Agenda
  + Overview of topics (Security, Logging, Monitoring, Scalability, Deployment, Real-world examples)
  + Expected outcomes of the session.
* **Topic 1**: Why Microservices on Azure?
  + Benefits of microservices architecture: Flexibility, Scalability, Testability, Fault Tolerance.
  + Azure's strengths: Multiple region support, global scalability, Azure Well-Architected Framework.

**Module 2: Architectural Overview**

* **Topic 4**: Clean Architecture for .NET Microservices
  + Explanation of Clean Architecture and DDD.
  + Role of CQRS for command-query separation.
  + Example: E-commerce domain (e.g., product catalog, orders, payments).
* **Topic 5**: Key Components of .NET Microservices
  + **Services**: Azure App Services, Azure AKS, Docker Containers.
  + **Messaging**: Azure Service Bus (Queues, Topics, FIFO).
  + **Storage**: Azure SQL Database (elastic pool, replication), Azure Cosmos DB.
  + **Caching**: Azure Redis Cache.

**Module 3: Building Resilient and Secure Microservices**

* **Topic 6**: Security Best Practices
  + Azure AD B2C for user authentication.
  + Service-to-service communication with Azure Managed Identity.
  + Private endpoints for secure communication.
  + GDPR & HIPAA compliance.
* **Topic 7**: Fault Tolerance and Resilience
  + Implementing retries, circuit breakers (using Polly).
  + Throttling and rate limiting with Azure APIM policies.
  + Failover strategies: RTO and RPO considerations.
* **Topic 8**: Logging and Monitoring
  + Centralized logging with Logstash, Elasticsearch, and Kibana.
  + Monitoring with Application Insights and Azure Monitor.
  + Example: Setting up health checks and alerts for microservices.

**Module 4: Deployment and Scalability**

* **Topic 9**: Containerization with Docker and AKS
  + Dockerizing .NET microservices.
  + Deploying to Azure Kubernetes Service (AKS).
  + Multi-region deployments and traffic management.
* **Topic 10**: Scaling with Azure Services
  + Auto-scaling with VMSS, Availability Zones, and Azure Traffic Manager.
  + Azure CDN for fast content delivery.
  + Load balancing: Azure Load Balancer, Application Gateway, Front Door.
* **Topic 11**: Deployment Strategies
  + CI/CD pipelines with Azure DevOps.
  + Blue-green and Canary deployments for version revisions.
  + Real-world example: Deployment of an e-commerce product catalog.

**Module 5: Advanced Azure Features**

* **Topic 12**: Event-Driven Architecture
  + Azure Event Grid, Event Hubs, and Service Bus for messaging.
  + Implementing SAGA pattern for distributed transactions.
* **Topic 13**: Azure Cognitive Services and OpenAI
  + Overview of Azure Cognitive Services (e.g., Vision, Language).
  + Real-world use case: Adding chatbot capabilities for customer support.
* **Topic 14**: Governance and Compliance
  + Azure Policy, Blueprints, and Sentinel (SIEM/SOAR).
  + Real-world example: Monitoring security and compliance in an e-commerce system.

**Module 6: Real-World Case Study**

* **Topic 15**: E-Commerce Deployment Example
  + Scenario: Deploying an e-commerce platform with microservices.
  + Components:
    - **Frontend**: Angular app deployed on Azure App Services.
    - **Backend**: .NET Core microservices with CQRS.
    - **Database**: Azure SQL with elastic pools.
    - **Caching**: Azure Redis Cache for session management.
    - **Messaging**: Service Bus for order processing.
  + Diagram of architecture.

**Module 7: Hands-On Demo (Optional)**

* **Topic 16**: Demo: Deploying a .NET Microservice on Azure
  + Step-by-step guide:
    1. Build and containerize a .NET Core microservice.
    2. Push to Azure Container Registry.
    3. Deploy to AKS with Ingress Controller.
    4. Monitor with Application Insights.

**Module 8: Best Practices and Conclusion**

* **Topic 17**: Best Practices for Azure Deployments
  + Follow the Azure Well-Architected Framework.
  + Optimize costs using Elastic Pools and Autoscaling.
  + Maintain code quality with SonarQube and Resharper.
* **Topic 18**: Conclusion
  + Recap of session highlights.
  + Call to action: Start your Azure journey today!
  + Contact information.