1. Fundamentals:

Cloud Concepts:

Read articles, watch video tutorials, and take online courses to understand the basics of cloud computing.
Learn about the advantages of cloud computing, different deployment models (public, private, hybrid), and service models (IaaS, PaaS, SaaS).
Research cloud providers' offerings, focusing on Microsoft Azure's services and features.

Azure Fundamentals:

Create a free Azure account if you haven't already.
Study Azure's basic concepts: subscriptions, billing, resource groups, and resource management.
Explore Azure's subscription tiers, including Free, Pay-as-You-Go, and Enterprise Agreements.
Familiarize yourself with Azure's pricing calculator and cost estimation tools.

Azure Management Tools:

Install Azure CLI on your local machine and practice using commands to manage resources.
Start with basics like listing resources and creating a virtual machine.
Set up Azure PowerShell and use it to automate resource deployment and management tasks.
Spend time navigating the Azure Portal, creating resources like virtual networks, storage accounts, and VMs.

Networking Fundamentals:

Study networking concepts relevant to Azure, such as IP addressing, subnets, and routing.
Research Azure Virtual Networks (VNets) and their role in isolating resources.

Create a simple Azure Virtual Network using the Azure Portal, set up address spaces, and create subnets.
Explore Network Security Groups (NSGs) and their role in controlling inbound and outbound traffic. Create and attach NSGs to subnets or VMs.

2. Core Services:

Virtual Machines (VMs):

Work through Azure tutorials or labs to create Windows and Linux VMs.
Explore different VM sizes based on your chosen operating system and performance requirements.
Learn about availability sets to ensure high availability by distributing VMs across multiple fault domains.

Azure Storage:

Create an Azure Storage account through the Azure Portal.
Set up Blob, Table, Queue, and File storage containers within the account.
Practice uploading files to Blob storage, creating and querying tables in Table storage, and sending messages via Queue storage.

Azure App Service:

Follow a step-by-step guide to deploy a simple web app using Azure App Service.
Experiment with scaling options: manually scale up/down or configure auto-scaling based on demand.
Set up deployment slots to create staging environments for testing app updates before deploying to production.

Azure Databases:

Provision an Azure SQL Database instance using the Azure Portal.
Connect to the database using SQL Server Management Studio or Azure Data Studio.

Explore data management tasks such as creating tables, inserting data, and executing queries.

Azure Identity and Access Management (IAM):

Create an Azure Active Directory tenant and add users to it.
Learn about Role-Based Access Control (RBAC) and its predefined roles.
Assign roles to users, granting them permissions to perform specific actions on resources.

3. Intermediate Level:

Azure Networking:

Dive deeper into networking concepts: Azure Load Balancers, VPN Gateway, and ExpressRoute.
Set up a VPN Gateway to connect your on-premises network to an Azure VNet.
Configure an Azure Firewall and define rules to control incoming and outgoing traffic.
Use Network Watcher to diagnose connectivity issues, visualize traffic flows, and implement security group rules.

Azure DevOps:

Create a GitHub account if you don't have one.
Set up a repository and push a sample project to it.
Set up a basic CI/CD pipeline using Azure Pipelines, automating the build and deployment process.
Configure continuous integration triggers to automatically build and deploy your app on code changes.

Azure Monitor and Logging:

Learn how to set up monitoring alerts based on specific conditions using Azure Monitor.
Configure Log Analytics to collect and analyze logs from various Azure services.
Create custom queries to gain insights into your application's performance and troubleshoot issues.

Azure Security:

Dive deeper into Azure Security Center and its capabilities for threat detection and prevention.
Set up Azure Key Vault to securely manage and store sensitive information such as passwords and API keys.
Study advanced security concepts like Azure DDoS Protection Standard and Azure Advanced Threat Protection.

Serverless Computing:

Dive into serverless technologies: Azure Functions, Logic Apps, and Event Grid.
Create an Azure Function that responds to an HTTP request or a trigger (e.g., timer).
Build a Logic App workflow that automates a business process by connecting different services and triggers.
Configure an Azure Event Grid topic and subscribe to events to trigger actions in response to specific events.

4. Advanced Specializations:

Azure Kubernetes Service (AKS):

Explore the fundamentals of Kubernetes and container orchestration.
Create an AKS cluster through the Azure Portal or Azure CLI.
Deploy a containerized application to the AKS cluster using Kubernetes manifests.
Experiment with scaling the application, performing rolling updates, and handling service discovery.

Azure Data Services:

Learn about data integration using Azure Data Factory.
Set up data pipelines to move and transform data between different sources and sinks.

Create a data lake and use Azure Databricks to perform data analysis and manipulation.

AI and Machine Learning:

Study Azure Machine Learning service for building, training, and deploying machine learning models.
Train a simple model using historical data and evaluate its performance.
Explore Azure Cognitive Services APIs for text analytics, image recognition, and language translation.

Azure IoT:

Understand IoT concepts and the role of Azure IoT services.
Connect a simulated device to Azure IoT Hub and send telemetry data.
Set up Azure IoT Edge to deploy modules and process data at the edge.

Azure Governance and Compliance:

Learn about Azure Policy and how it enforces rules and standards across your organization.
Create custom policies that align with your organization's compliance requirements.
Explore Azure Blueprints for defining and deploying standardized environments.

5. Expert Level:

Advanced Networking and Security:

Dive deeper into Azure networking concepts like VNet peering, service endpoints, and ExpressRoute.
Implement application security using Azure Application Gateway and Web Application Firewall (WAF).

High Availability and Disaster Recovery:

Study advanced techniques for ensuring high availability, such as deploying across multiple regions and using Traffic Manager.
Plan for disaster recovery scenarios using Azure Site Recovery, including failover and failback procedures.

Azure Architecture and Design:

Learn about designing solutions that are scalable, resilient, and cost-effective on Azure.
Explore reference architectures and best practices provided by Microsoft for different scenarios.
Practice creating Azure Resource Manager templates to automate the deployment of complex environments.

Cost Management and Optimization:

Deepen your understanding of Azure Cost Management and cost allocation.
Implement strategies for optimizing costs, such as right-sizing resources, utilizing reserved instances, and leveraging serverless services.

Contributions and Certifications:

Consider sharing your experiences, insights, and tips through blog posts or articles.
Research Azure certifications aligned with your specialization and career goals.
Prepare for and pursue relevant Azure certifications to validate your expertise.