55246 SQL 2016 Always On High Availability

Category: AI, Data & Analytics | **Vendor:** Microsoft Technical

Duration: 24.00 hours (3 days) **19.5 CPD Hours** **Rating:** ⭐ 4.6 (5,878 reviews)

Course Information

Delivery Format: Instructor Led - Online

Course Overview

This three-day instructor-led course is designed for database administrators and Windows engineers to familiarize them with the concepts in SQL AlwaysOn and High Availability. The course utilizes SQL 2016, but explains the differences from SQL 2012- SQL 2014.

About This Course

This three-day instructor-led course is designed for database administrators and Windows engineers to familiarize them with the concepts in SQL AlwaysOn and High Availability. The course utilizes SQL 2016, but explains the differences from SQL 2012- SQL 2014.

Who Should Attend

Experienced DBAs, Windows Server pros, team leads.

Prerequisites & Entry Requirements

General Prerequisites:

Experience as SQL DBA, Experience as Windows IT PRO

Learning Outcomes

Upon successful completion of this course, participants will be able to:

Understaand AlwasyOn High Availability Employ Server 2016 Failover Clustering Deploy SQL Failover Clusters Work with Availability Groups Perform maintenance Monitor and Troubleshoot Availability Groups

Detailed Course Outline

1 - Introduction

2 - ALWAYSON AND HIGH AVAILABILITY CONCEPTS AND TERMINOLOGY

- Concepts and Terminology
- Table of Availability
- High Availability
- Causes of Downtime
- Planned downtime
- Unplanned downtime
- Disaster Recovery
- Recovery Time Objective (RTO)
- Recovery Point Objective (RPO)
- Recovery Level Objective (RLO)
- Storage Area Networks (SAN)
- Edition Changes from SQL 2012
- SQL Server 2014 Changes
- SQL Server 2016 Changes
- Legacy Solutions prior to Always On
- Failover Cluster Instances
- Log Shipping
- A Typical Log Shipping Configuration
- Monitor Server
- Replication
- Database Mirroring
- Database Mirroring Terminology
- Principle
- Mirror
- Witness (red box in image above)
- Database Snapshots
- Limitations of legacy solutions:
- What do we mean by Always On?
- Table of Always On Comparison

3 - WINDOWS SERVER 2016 FAILOVER CLUSTERING

- Understanding Failover Clustering in Server 2016
- Statefull High Availability Solution
- Supported in both Standard and Datacenter
- Servers should run similar hardware
- Should run same edition
- Hyper-V best with datacenter
- Certified for Windows server logo
- Shared Storage
- Quorums
- Node Majority
- Node and Disk Majority configuration:
- Node and File Share Majority
- No Majority
- Configuration
- Cluster Networks Best Practices
- Connection to nodes to shared storage
- Private network for internal cluster
- Public network for client connections
- Cluster Aware Updating
- Virtual Machine Failover Clustering
- Preferred Owners
- Failover Failback
- Resources
- Dependences
- Heartbeat

4 - SQL 2016 FAILOVER CLUSTER INSTANCES

- Failover Cluster Instance
- As A FCI Appears To A Client

5 - SQL 2016 ALWAYS ON AVAILABILITY GROUPS

- Availability Groups and Replicas
- Primary Replica
- Secondary Replicas
- Availability Group Listener
- Availability Mode
- Synchronous Commit Mode
- Asynchronous Commit Mode
- Failover Modes
- Automatic Failover Without Data Loss
- Automatic Failover Requirements:
- Manual
- Manual Failover Requirements
- Common Topologies

6 - The Dashboard

- The Dashboard
- How to view logs
- Using replication with Logins
- Using partially contained databases

7 - Active Secondary Availability Group Actions

- Reporting with Secondary Replicas
- Configuring a Readable secondary
- Read-Only Routing
- Load Balancing
- Lab: Configure a Read-Only Secondary
- Database Backups with Secondary
- Steps of Backup Using secondary
- Backup Preference Options

8 - Maintenance

- DBCC Checks
- Database Adding and Removing

9 - MONITORING AND TROUBLESHOOTING AVAILABILITY GROUPS

- The Dashboard in Depth
- Events
- Policy Based Managemnt for Availability Groups

Frequently Asked Questions

Q: What delivery options are available for 55246 SQL 2016 Always On High Availability?

We offer multiple delivery formats:

- Live Instructor-Led Classroom Online (Virtual/Live Online)
- Traditional Instructor-Led Classroom Training (ILT)
- On-site delivery at your offices anywhere in United Kingdom
- Private dedicated courses customized for your team

Q: How many CPD hours does this course provide?

The 3-day 55246 SQL 2016 Always On High Availability course provides up to 19.5 CPD hours of structured learning. CPD certificates can be provided upon request.

Q: What is the duration of the 55246 SQL 2016 Always On High Availability training?

The training takes place over 3 day(s), with each day lasting approximately 24.00 hours including breaks for lunch and refreshments.

Q: Do you provide corporate training for 55246 SQL 2016 Always On High Availability?

Yes, we provide corporate training, dedicated training, and closed classes for 55246 SQL 2016 Always On High Availability. Training can take place anywhere in United Kingdom including London, Manchester, Birmingham, Edinburgh, or live online allowing teams from across United Kingdom or internationally to attend.

Q: Why choose Nexus Human for 55246 SQL 2016 Always On High Availability?

Nexus Human is recognized as one of the leading training providers. Our trainers have won multiple awards including:

- Small Firms Best Trainer Award
- National Training Partner of the Year (Ireland) - Multiple Years
- Global Top 30 Instructor Awards (2012, 2019, 2021)
- Tech Excellence Award Nominations
- Learning Performance Institute (LPI) External Training Provider Sponsor 2024

Q: Are there any discount codes available?

Yes! Use discount code **PENPAL5** when booking your 55246 SQL 2016 Always On High Availability training. Please note that only one discount code can be used per booking and cannot be combined with other special offers.

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