

# Mission Critical SQL Server Workshop

Whether your business hours are 9 to 5 or 24x7x365, your systems need to be up when you need them. This advanced 4-day workshop, designed for SQL Server professionals and IT administrators alike, will not only teach you the technical and non-technical things you need to have for solid high availability and disaster recovery solutions, but also show you demonstrations and hands-on labs with multiple versions of SQL Server. Planning, implementing, and administering of the solutions will be covered, and will be taught by Cluster MVP, author, and SQL Server high availability expert Allan Hirt.

## Workshop Prerequisites

Before attending this workshop, participants should have:

- A good understanding and practical experience of SQL Server administration
- An understanding of basic IT fundamentals

## Workshop Objectives

Covering multiple versions of SQL Server (2008 through 2012) as well as multiple versions of Windows (including Windows Server 2012), this workshop will provide you with holistic and practical approaches to deploying highly available SQL Server implementations based on real world experience.

The latest features introduced in SQL Server 2012 such as AlwaysOn availability groups, true multi-site failover clustering instances, and support for Windows Server Core will all be covered.

Whether you have older SQL Server and Windows deployments and are looking to brush up your skills, considering an upgrade to a newer version of SQL Server or Windows, or looking to implement a new solution that is mission critical, this workshop will teach you what you need to know to be successful.

## About the Presenter

The presenter of the workshop is Cluster MVP and SQLHA co-founder Allan Hirt, who has been working with SQL Server since 1992.

Besides traveling the world to train and mentor, Allan also works with clients designing and implementing mission critical SQL Server solutions. While a good portion of time is focused on high availability and disaster recovery related topics, he also does quite a bit of work in most of the IT-related infrastructure topics for SQL Server such as consolidation, virtualisation, disk configuration, administration, operations, and more.

Over the years, Allan has published numerous whitepapers, articles, and books on mission critical topics. He often presents at events such as PASS Summit, SQLBits, and TechEd North America. His last book was *Pro SQL Server 2008 Failover Clustering* (Apress, 2009), and its sequel, *Mission Critical SQL Server 2012*, is due out in 2013.



Course Code: SPAH13

Course Duration: 4 Days

## Workshop Summary

**Module 1:** Mission Critical Basics

**Module 2:** Windows Deployment for SQL Server

**Module 3:** SQL Server Failover Clustering Instances

**Module 4:** AlwaysOn Availability Groups

**Module 5:** The Rest of the SQL Server Story

**Module 6:** Solution Design

## Hands On Labs

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## Workshop Outline

### Module 1: Mission Critical Basics

Ensuring that your SQL Server instances and databases are reliable, available, and highly performing takes much more than just technology or a single feature in SQL Server. Your overall strategy should encompass people and processes, both of which will be covered in this module that sets the foundation for the entire workshop.

### Module 2: Windows Deployment for SQL Server

One of the challenges that many DBAs face is ensuring that the underlying Windows builds are done correctly whether they are using Windows Server 2008 R2, 2012, or something else. Topics such as deploying SQL Server 2012 on Windows Server Core will be covered, as well as the Windows portion of failover clustering from a SQL Server perspective.

### Module 3: SQL Server Failover Clustering Instances

Besides understanding the Windows portion of clustering which is covered in the previous module, it is essential to know the SQL Server side as well. Learn how to plan, deploy, administer, and troubleshoot clustered instances and deployments of SQL Server, including multi-site clusters using SQL Server 2012.

### Module 4: AlwaysOn Availability Groups

Introduced in SQL Server 2012, the AlwaysOn availability groups feature not only provides a way to make databases highly available, but you may be able to take advantage of some of its benefits such as read-only replicas for reporting. Deploying availability groups is deceptively simple, and this module will show you how to plan, implement, and administer availability groups, including multi-site architectures.

### Module 5: The Rest of the SQL Server Story

Whether it is looking at older, legacy features such as log shipping, replication, or database mirroring, looking at options like virtualization, or performing proactive administration to ensure reliability, health, and ultimately uptime, there is more to the availability story of SQL Server than the two marquee features of FCIs and AGs. This module will cover what you need to think about and possibly implement, including solid backup and restore and patching strategies, to ensure that you are positioned to have the availability your business requires.

### Module 6: Solution Design

It isn't enough to only understand the technologies individually, or what you need to do such as making backups. You need to bring all of the requirements—both technical and non-technical, platform and administration—together and design the right solution for your deployment. You will learn how to approach this challenge and balance the different requirements and factors to produce an actionable plan, not just something that will live in a document or look good as a diagram in Visio.

### Hands-On Labs

An important aspect of this four-day workshop is acquiring more than instruction: you will also get hands on experience. For example, you will be building Windows Server failover clusters and deploying, administering, and maintaining both clustered instances of SQL Server as well as availability groups. The workshop is designed to recognize that students may be at different levels, so there are three different difficulties for selected labs: beginner, intermediate, and advanced. This will offer a challenging and rewarding hands-on encounter no matter if you are relatively new to SQL Server or someone who has been using it for years.

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