

## SQL Server Data Storage Formats: Internals, Performance and Best Practices

This seminar will describe the different formats available for storing data, starting with basic rows in heaps. We'll look at how SQL Server keeps track of what storage space belongs to which objects and examine some of the tools for exploring the actual page structures. We look at the special options added in SQL Server 2005 to allow more flexibility in storing large data objects and discuss the performance implications of using these options. We'll look at the completely new structures added in SQL Server 2008 including the new filestream data, compressed data and sparse data columns. Finally, we'll look at the metadata to determine exactly what is being stored and where, and discuss best practices for choosing the particular type of storage format.



**Author & Facilitator:** Author of the best selling books Inside SQL Server 2000, Inside SQL Server 2005 - The Storage Engine, Inside SQL Server 2005 - Query Tuning and Optimization and SQL Server 2008 Internals. Kalen has been a columnist for SQL Server Magazine since the first issue as well as writing for MSDN and TechNet magazines. Kalen's SQL Server seminars have been delivered internally for Microsoft events and as recommended training for premier Microsoft partners around the world.

#### **Section 1: Basic Storage**

- Basic storage concepts
- Basic row structures
- Tools for examining storage structures
- Table and row structures
- Basic metadata for tables and indexes

#### **Section 2: Large Object Storage**

- · Row overflow data
- Large object storage
- · Allocation information and metadata

# Section 3: Semi-relational data and non-relational data in SQL Server 2008

- Sparse columns
- Filestream data

### **Section 4: Compression**

- Row compression
- New row structure
- · Page compression
- Backup compression



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