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.NET Developer Conference 2007

17th and 18th October 2007
Microsoft Campus, Reading, UK

SQL Server 2005 Compact Edition
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Agenda

- SQL Server Compact Edition
 - Brief History
 - Features
 - Limitations
- Purpose of SQL Server CE
 - Occasionally Connected Systems
 - Powerful Alternative to Microsoft Access for Single User Applications
- CE vs. SQL Standard
 - Shared Features
 - CE only Features
 - Missing SQL Standard Features
- CE vs. Microsoft Access
 - SQL Server CE Pros
- Implementation
 - Object Model
 - Administration
 - Deployment
 - ◇ Occasionally Connected Application (Replication)
- Demo
 - Synchronization over HTTP
 - Deployment in MSI Package
- Links



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SQL Server Compact Edition

- Brief History
 - Initially developed for use on mobile devices
 - Latest release dubbed "SQL Everywhere"
- Features
 - It's Free
 - Lightweight (1.8 MB Installer)
 - Small Footprint (3 MB on disk, memory can be specified, but default is 640 KB)
 - Installer accepts command line arguments for easy deployment in MSI package
 - Single file database eases administration
 - Encrypt-able
 - Portable
- Limitations
 - Single User
 - No SQL Agent
 - No support for stored procedures



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Purpose of SQL Server CE

- Occasionally Connected Systems
 - Ideal for mobile devices used in the field (i.e. Laptops, Windows CE based systems, mobile phones, etc.)
- Powerful alternative to Microsoft Access
 - SQL Server CE offers a powerful and free alternative to Microsoft Access for single user applications requiring a data store.



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CE vs. SQL Standard

- Shared Features
 - T-SQL language
 - Common layout / design
 - Replication
- CE only Features
 - Free
 - Lightweight
 - Deployable in MSI
- Missing SQL Standard Features
 - Views
 - Triggers
 - Stored Procedures
 - CLR Integration
 - User Defined Functions
 - No network connectivity
 - No Full-Text Support
 - 4 GB Database Size Limit
 - Does not support all SQL data types
 - ◇ VARCHAR
 - ◇ CHAR
 - ◇ SMALLDATETIME
 - ◇ XML
 - ◇ MAX types (VARCHAR(MAX), NVARCHAR(MAX))


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CE vs. Microsoft Access

- SQL Server CE Advantages
 - Native Client for .NET
 - Encrypt-able database
 - Replication
 - Supports T-SQL

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Implementation



- Object Model
 - Namespace
 - ✦ System.Data.SqlServerCe
 - Major Classes
 - ✦ SqlCeEngine
 - ✦ SqlCeConnection
 - ✦ SqlCeCommand
 - ✦ SqlCeDataAdapter
 - ✦ SqlCeDataReader
- Administration
 - Performed through the SqlCeEngine class
 - ✦ CreateDatabase()
 - ✦ Compact()
 - ✦ Repair()
 - ✦ Shrink()
 - ✦ Upgrade()
 - ✦ Verify()
- Deployment
 - Occasionally connected systems
 - ✦ Replication for synchronization
 - ✦ MSI Package Deployment for Single User Applications

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Demonstration

Synchronization over HTTP



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Demonstration

Deployment in MSI Package

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Links

- Downloads for SQL Server Compact 3.5 Beta 2
 - <http://www.microsoft.com/sql/editions/compact/beta2.mspx>

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