Advantage™ Database Server OLE DB Provider (for ADO)

FEATURES

- Provides native client/server access to the high performance Advantage Database Server RDBMS
- Supports SQL commands with both the Advantage Database Server and Advantage Local Server
- Requires no other database engines (Jet, MSDE, BDE, ODBC, etc.)
- Includes full server-based transaction processing to eliminate database corruption, drastically minimizing support costs

The high performance Advantage OLE DB Provider provides native data access to the Advantage Database Server and Advantage Local Server directly or via ADO. The Advantage OLE DB Provider creates a seamless interface between the Advantage Database Server or Advantage Local Server and any development environment that can use ADO or OLE DB directly including Visual FoxPro, Visual Basic, Access, Visual C++, Delphi, and C++Builder. The Advantage OLE DB Provider enables easy and reliable access to business-critical data for local, peer-to-peer, client/server, distributed, and Web-based applications.

SERVERS

The Advantage OLE DB Provider ties in seamlessly with the Advantage Database Server, a true client/server solution that adds performance and stability to multi-user applications. The Advantage OLE DB Provider also provides access to the Advantage Local Server. The Advantage Local Server provides non-client/server access to your data, which is perfect for local and small multi-user networked environments, and ideal for customers who may later want the enhanced performance and security capability of a client/server RDBMS with the Advantage Database Server. Distribution of the Advantage OLE DB Provider and the Advantage Local Server is royalty-free for applications deployed in both stand-alone and peer-to-peer environments.

Advantage Database Server is a complete, high performance data management solution. The Advantage Database Server supports NetWare, Windows, and Linux networks and requires no database administrator. Advantage Database Server allows developers the flexibility to combine powerful SQL statements and relational data access methods with the performance and control of navigational commands. The Advantage SQL engine enables developers to execute queries and other SQL commands. The Recordset returned from an SQL query or from a table opened directly can be navigated via the highly optimized Advantage ISAM database engine. The result is an easy-to-use interface that supports SQL commands and direct Recordset navigation, all in one integrated solution.

FULL SCALABILITY—WRITE ONCE, DEPLOY ANYWHERE

Advantage applications can be deployed in stand-alone, peer-to-peer, client/ server, and Internet environments with one set of source code. Advantage does not require a different OLE DB Provider or different set of code for different network environments. The Advantage OLE DB Provider will automatically determine if the Advantage Database Server is available directly or via the Advantage Internet Server, or whether the Advantage Local Server should be used. You only need to write one application with one version of code for local, peer-to-peer, client/server, or Internet file access.

SPECIFICATIONS

ADO objects

The following ADO objects are supported with the Advantage OLE DB Provider. Each object has a list of supported methods, properties, and collections that are directly supported by the Advantage OLE DB Provider. The Advantage OLE DB Provider is ADO 2.1 compliant.

FEATURES - CONTINUED

- Provides complete referential integrity support including primary/foreign key definition and cascaded updates and deletes
- Includes database security functionality and encryption support
- Triggers are available to provide a powerful means to maintain business rules at the database level - independent of the client application
- Designed for use with Visual FoxPro, Visual Basic, Access, Visual C++, Delphi, C++Builder, and other development environments that provide data access via ADO or OLE DB
- Includes support for direct Advantage access via low-level Advantage Client Engine API functions

Connection object

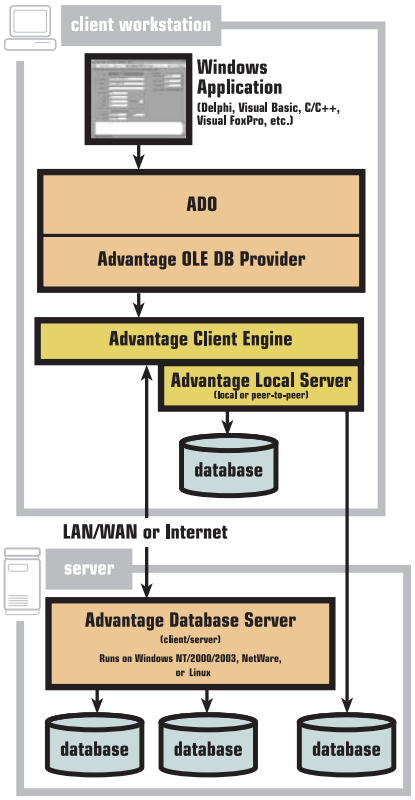
methods	properties	collections
BeginTrans	Attributes	Errors
Close	CommandTimeout	Properties
CommitTrans	ConnectionString	
Execute	ConnectionTimeout	
Open	CursorLocation	
OpenSchema	DefaultDatabase	
RollbackTrans	IsolationLevel	
	Mode	
	Provider	
	State	
	Version	

Recordset object: can open directly or via SQL query

methods	properties	collections
AddNew	AbsolutePage	Fields
CancelBatch	AbsolutePosition	Properties
CancelUpdate	ActiveCommand	
Clone	ActiveConnection	
Close	BOF	
CompareBookmarks	Bookmark	
Delete	CacheSize	
Find	CursorLocation	
GetRows	CursorType	
GetString	DataMember	
Move	DataSource	
MoveFirst	EditMode	
MoveLast	EOF	
MoveNext	Filter	
MovePrevious	Index	
Open	LockType	
Requery	MaxRecords	
Resync	PageCount	
Seek	PageSize	
Supports	RecordCount	
Update	Sort	
UpdateBatch	State	
	Status	
	StayInSync	

Command object

methods	properties	collections
Cancel	ActiveConnection	Parameters
CreateParameter	CommandText	Properties
Execute	CommandTimeout	
	CommandType	
	Name	
	Prepared	
	State	



ADVANTAGE SPECIFICATIONS

Server operating systems (via the Advantage Database Server)

Novell NetWare 5.x or greater (IP, IPX)
Microsoft Windows x86 (IP, IPX)
Microsoft Windows x86_64 (IP)
Linux x86, x86_64 (IP)

Client operating systems

Microsoft Windows

SUPPORTED DATA TYPES

Advantage ADT table data types

AutoIncrement	4-byte read-only integer value from 1 to 4,294,967,296 unique for each record in the table.
Binary	Variable length BLOB containing binary data. The size of each field is limited to 4 GB. The binary image data is actually stored in a separate file, called a memo file, to reduce table bloat.
Character	Fixed length character field from 1 to 65,530 bytes that is stored entirely in the table.
Cicharacter	Case insensitive fixed length character field from 1 to 65,530 bytes that is stored entirely in the table.
Date	4-byte date field.
Double	8-byte IEEE floating point value in the range 1.7E +/-308 (15 digits of precision).
Image	Variable length BLOB containing image data. The size of each field is limited to 4 GB. The binary image data is actually stored in a separate file, called a memo file, to reduce table bloat.
Integer	4-byte long integer values from -2,147,483,647 to 2,147,483,647.
Logical	1-byte logical (boolean) field.
Memo	Variable length memo field containing character data. The size of each field is limited to 4 GB. The memo data is actually stored in a separate file, called a memo file, to reduce table bloat.
ModTime	Timestamp field automatically updated when a record is updated.
Money	Currency data stored internally as a 64-bit integer, with 4 implied decimal digits from -922,337,203,685,477.5807 to +922,337,203,685,477.5807. The Money data type will not lose precision.
Numeric	Fixed length (exact representation) numeric up to 32 bytes.
Raw	Fixed length data-typeless raw data field from 1 to 65,530 bytes.
RowVersion	64-bit auto-incrementing integer value.
ShortInteger	2-byte short integer value from –32,767 to 32,767.
Time	4-byte value representing time of day.
TimeStamp	8-byte value representing date and time of day.
VarBinary	Variable length binary data stored entirely in the table.
VarChar	Variable length character data stored entirely in the table.

DBF table data types

AutoIncrement	4-byte read-only integer value from 1 to 4,294,967,296 unique for each record in the table.
Binary	Variable length BLOB containing binary data. The size of each field is limited to 4 GB. The binary image data is actually stored in a separate file, called a memo file, to reduce table bloat.
Character	Fixed length character field from 1 to 65,530 bytes that is stored entirely in the table.
Date	8-byte date field.
Double	8-byte IEEE floating point value in the range 1.7E+/-308 (15 digits of precision).
Image	Variable length BLOB containing image data. The size of each field is limited to 4 GB. The binary image data is actually stored in a separate file, called a memo file, to reduce table bloat.
Integer	4 byte-Integer values from -2,147,483,648 to 2,147,483,647.
Logical	1-byte logical (boolean) field.
Memo	Variable length memo field of up to 65,530 bytes. The size of each field is limited to 4 GB. The memo data is actually stored in a separate file, called a memo file, to reduce table bloat.

Money	Currency data stored internally as a 64-bit integer, with 4 implied decimal digits from -922,337,203,685,477.5807 to +922,337,203,685,477.5807. The Money data type will not lose precision.
Numeric	Fixed length (exact representation) numeric up to 32 bytes.
TimeStamp	8-byte value representing date and time of day.
VarBinary	Variable length binary data stored entirely in the table.
VarChar	Variable length character data stored entirely in the table.

Database maximums

Maximum ADT table size
- Windows NT/2000/XP/2003 with NTFS — 16 exabytes (18,446,744,073,709,551,616 bytes)
- Windows NT/2000/XP/2003 with FAT32 — 4 gigabytes (4,294,967,296 bytes)
- NetWare 5 or greater with NSS file systems — 16 exabytes (18,446,744,073,709,551,616 bytes)
- NetWare 5 or greater with traditional file systems — 4 gigabytes (4,294,967,296 bytes)
- Linux pre-2.1.2 — 11 glibc and pre-2.4 kernel — 2 gigabytes (2,147,483,648 bytes)
- Linux glibc 2.1.2 — 11+ with kernel 2.4+ — 8 exabytes (9,223,372,036,854,775,807 bytes)

Maximum DBF table size — Maximum record count (2,147,483,648) multiplied by record length (depending upon operating system and file system)

Maximum number of records — 2.2 billion

Maximum record length — 65,530 bytes

Maximum field name length — 128 characters for ADT tables, 10 characters for DBF tables (dictionary-bound Visual FoxPro tables can have names up to 128 characters)

Maximum number of columns per table — ~3,500 for ADT tables, 2,035 for DBF tables

iANYWHERE SOLUTIONS, INC.
WORLDWIDE HEADQUARTERS
ONE SYBASE DRIVE
DUBLIN, CA 94568-7902
U.S.A.

North America
Advantageinfo@iAnywhere.com
1 800 801 2069

Germany
ADS-team@iAnywhere.com
+49 (0) 7032 / 798 - 200

United Kingdom
AdvantageUK@iAnywhere.com
+44 (0)117 333 9000