



Session 9

Database Management and Technical Support of EDExpress



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Introductions

- Who is this session geared for?
- Evaluations
- Questions



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Agenda

- Hardware and Platform setup
- Optimizing your system for EDEExpress
- Installation and Setup tips
- Preventive Maintenance
- Utilities
- Solutions to Common Errors
- Other technical tips



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“Behind the Scenes” of EDExpress for Windows



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Type of Application and Database

- MS Access 97 with Visual C++ Graphic Interface
- 32-bit EDEExpress uses DAO DLL (Data Access Object/Dynamic Link Library) files to communicate with database
- MS Access updateable SQL rather than C++ SQL.





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Software design

- EDEExpress has a very modular design and each version changes the database structure
- Upgrades must be made in version order
- No versions can be skipped
- Since files are registered in the registry you must install every version to the same directory



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Versions

- Each program year stands separate from the year before and the coming year
- Version format is: X.Y.Z
 - X equals program year
 - Y equals module added
 - Z equals the service release #





“Setting the Stage”: Hardware and Platform Setup



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Future Hardware Requirements

- Are imminent
- Will probably include 128 MB RAM and 400-800 MHz Pentium Processor
- If you want multi-tasking capabilities you will want to go above the MINIMUM requirements



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PC Configuration

- 32-bit EDEExpress for Windows can only be run in Windows 95, 98, Windows NT 4.0 and now Windows 2000
- The AUTOEXEC.BAT file must contain
 - SET TEMP=C:\WINDOWS\TEMP
 - SET TMP=C:\WINDOWS\TEMP
- The CONFIG.SYS file must contain
 - FILES=120
 - BUFFERS=32



Network Configuration

- Three network operating systems are supported:
 - Novell 3.x or higher
 - NT 4.x or higher
 - Windows 2000
- No other network operating systems are supported. This includes peer to peer networks



Networking

- EDEExpress databases should not reside on high traffic servers
- EDEExpress traffic should not be routed through high traffic routers/bridges/etc.
- Have sufficient RAM to service the server without slowdowns
- Database should be in an environment where data delivery does not get slowed



Networking (cont.)

- Make sure the Financial Aid Dept. has access to a minimum of 600 MB of server space
- If you are running through an NT gateway to a Novell server, the permissions/rights and ownership must be equivalent on both servers



Novell Specific Settings:

- Make sure AUTOEXEC.NCF file on NetWare server console contains:
 - Set Maximum Record Locks Per Connection=10000
- For immediate changes without rebooting the server, type these commands at the console prompt
- Directory rights should be set to:
 - W - Write F - File Scan R - Read
 - C - Create M - Modify E - Erase



Novell notes:

- You cannot have a paths longer than 46 characters and also have special characters (for example blanks, “_”, “-”) in that path
- Novell Client Version 2.2 has been shown to cause irregular printing issues



NT Specific Settings:

- Maximize throughput for file sharing
 - At the server control panel go to Start | Settings | Control Panel | Network. On Network screen choose the Services Tab. Double Click on the Server icon in the window labeled Network Services, then choose Maximize Throughput for File Sharing



NT Specific Settings (cont.)

- Both the location and the size of the paging files on the NT server are important to the functionality of the software
- The folder and the files (Expres02.mdb and Expres02.ldb) must be owned by the financial aid group
- Permissions must be Change or better



NT Notes

- Your database directory name is case sensitive on your NTFS server
- You must be logged in with administrative rights to a new NT Workstation to install software
- If the person installing has full control permission s/he will claim ownership of the folder and cause initialization errors for others



Windows 2000

- Everyone logging into EDExpress on a Windows 2000 Professional operating system must be a “Power User”
- Unlike NT Users, in Windows 2000 are considered “restricted users” and cannot change system files - in this case they cannot register the DLL’s in the registry



Printing Setup

- EDEExpress prints with LaserJet printers
- DeskJet, Inkjet, BubbleJet printers are often incompatible with EDEExpress and are not supported
- EDEExpress prints best using a PCL5e drivers
- The printer that you will be printing to must be set as default





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“Jumping In”: Installation and Setup



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Installation Options

- Stand Alone
 - Full - installs all files locally
 - Custom - select modules you want to install
- Network Server
 - Installs database only on network
- Network Workstation
 - Full - installs all files except database
 - Custom - select modules you want to install



Full versions Verses Service releases

- Full version upgrades modify (and can overwrite) the database
- Service releases simply upgrade DLL's on the local drive; and therefore do not affect the database
- Service release version numbers are not reflected in the opening splash screen



Uninstalling

- Always uninstall before reinstalling
- Uninstall removes all DLL's which are not shared from 4 install directories
- Uninstall updates the registry
- Uninstall removes the database !!!!
- Uninstall does not remove the install.log (for auditing purposes)



Program Directories

- **\Program Files\EDESuite\EDExpress for Windows - 2001-2002 - Main application target directory (EDExpress specific files)**
- **\Windows\System or \WINNT\System32-System shared DLL target directories (i.e. MFC42.DLL, MSVCRT40.DLL)**
- **\Program Files\Common Files\Microsoft Shared\DAO - all Data Access Object DLL's will be located here**
- **\Program Files\Common Files\EDEShared - No longer used for for EDExpress**



Directory for Network Server

- Default directory is first available network drive\EDExpres02
- You can specify a UNC path
- You can map a drive for the database using a drive letter specification
- You can change the path to the database during the install or any time later



Install Tips

- Install the most recent version (except for service releases) of the software if you are just beginning
- Once you have data you must upgrade incrementally
- Do not skip upgrades unless you are doing a full install to a new PC
- Upgrade each PC before you open the software and allow it to do the one time update



Install Tips (cont.)

- Reboot, then open each version of the software to allow the one-time update to modify the database structure before installing next version (i.e. open 7.1 before installing 7.2)
- Doing an install of ver 7.x will not affect data from any other program year
- Perform preventive maintenance before you begin
- **MAKE A BACKUP OF THE DATABASE**





Why Download One Disk at a Time?

- The school has poor/static filled phone lines
- The FAA has a slower modem
- The FAA has to put it on floppy disk
- The FAA needs to have access to the computer while downloading
- The FAA has had problems downloading the full version



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Unpacking the Files with the One File Option

- Find the downloaded file in the directory you put it into and double click on it
- Unpack to the temp directory (usually C:\temp or C:\Windows\Temp)
 - æ Note: the unpack procedure asks if you want to install to the c:\temp
- Click Finish and the Install will begin





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“Keep it Humming”: Preventive Maintenance



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PC Maintenance

- Perform regular hard disk maintenance
 - SCANDISK
 - DEFRAG
- Delete all files from \temp directory, “*.chk” and “found.*” files from root directory
- Clear internet cache on a regular basis
- Run Virus Scan programs regularly



PC Maintenance

- Maintain adequate free hard drive space (bare minimum 600 MB)
- Use a surge protector with modem protection
- Exit programs and shut down gracefully
- Backup, Backup, Backup
- Limit multitasking while running EDEExpress



Repair and Compact

- Run utilities weekly or when you see unpredictable/random behavior or error messages
- Repair first to fix database errors
- Follow with Compact to create a new, organized copy of EDEExpress database
 - Compact defragments and re-indexes database, making it smaller and faster
 - Compact will succeed only if PC has enough free hard drive space for 3 copies of database





Where to Repair and Compact 32-bit Database

- Under tools|utilities menu in the software
- From Microsoft Access 97 only (not Access 2.0, Access 95, Access 7 or Access 2000)
- From separate utility CompactandRepair.exe



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Just Do IT!

Verify Database

- Checks for data relationship integrity
- Always run Repair Database and Compact Database prior to and after running Verify Database
- Run this utility from the tools |utilities menu from within the software
- Run Verify Database weekly



Utilities on a LAN

- Repair, Compact, and Verify will fail if users are logged into EDEExpress or if there are record/user locks
- Database utilities lock users out of the database
- High traffic on a network can cause EDEExpress utilities to fail
- Incorrect network configuration can cause the database to be lost during compact



Tips for Running Utilities

- Copy database to the local drive to run utilities if errors do not clear after running utilities on the server
- If running the utilities within the software fails, try running the utilities from Access 97 or with the compactandrepair.exe
- If repair fails, try compact first, then repair





“What Happened?”

Solutions to Common

Errors



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Most Install Errors Are Caused by:

- Skipping a version
- Installing one version in one directory and a second version in another directory or drive
- Installing with other programs running
- Hard drive needs to be cleaned up
- Failed download
- Incorrect rights/permissions or ownership



Install error notes:

- MFC42.DLL is in use during install
- Some versions of Norton Anti-Virus v 5.0 will cause install errors
- The Compaq Intelligent Manageability must be uninstalled to successfully install EDExpress software
- Turn off everything before you begin the install
- You may need to boot to safe mode to do the install



Common Install errors

- ComponentMoveData had the following...
Media Name...
- Version Mismatch...
- Update failed...
- Setup requires a different version of Windows. Check to make sure you are running setup on the platform it was intended for





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Resolutions for the ComponentMoveData Error

- ComponentMovedData Error is an Install Shield Wizard write error resulting from a conflict or system configuration issue
- Is there is enough hard drive and RAM?
- Have you done normal preventive maintenance on your PC?
- Is there a temp directory? Is it empty?



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Resolutions for the ComponentMoveData Error

- Do you have set temp and set tmp lines in your autoexec.bat file?
- Are programs running, that you cannot close?
- Are you using an unusual path to data?
- Did you reboot after uninstall?



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Resolutions for the ComponentMoveData Error

- Did you close all other software?
- NT Workstation must have Service Pack 5 or higher
- Are you logged in with admin permissions to the NT Workstation?
- Are your paging files set sufficiently high?



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Skipped Version Errors

- Error opening table in A Export Apps:QRY other tables...
- “Dr. Watson Error “exception: access error caused by expres01.exe ” (NT)
- 'This program performed and illegal operation and will be shut down...invalid page fault in module unknown...' (Win9.x)
- Item Not Found in this Collection...



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Resolving Skipped Version Errors

- Database structure is not correct
- Restore a backup from an earlier version and upgrade sequentially
- If database contains only applications, you must reinstall a new database and rebuild
- If you have Direct Loans or extensive packaging or Pell data contact CPS for further assistance





DLL Related Errors

- Invalid page fault in module
KERNEL32.DLL
 - On closing student records
 - On opening the software
 - With a program abnormal termination
- Invalid page fault in module
CTL3D32.DLL on initializing the software
- Invalid page fault in module
MSVCRT.DLL when trying to export
- Invalid page fault in module MFC42.DLL





Resolution to DLL Related Errors

- Make sure Windows is calling the correct file when multiple copies of the DLL exist
- Check the version of the DLL in question, rename and reinstall
- EDEExpress will install the correct version - if the file is not in use



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Resolution to DLL Related Errors

- EDEExpress does version checking so it will not overwrite a newer file
- Frequently the file in question is not the file that is out of date - but not always
- Apply all Windows Service Packs



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Rights/Permission/Network configuration Issues

- Ordinal Number 6451 could not be located in MFC42.dll
- Componentmovedata errors referencing the updatedb.mdb
- File Exception Result Code #5
- During password reset, you get the message that the database could not be found



Update Failed

- This is a result of a local environmental issue
 - Insufficient drive space
 - Insufficient RAM
 - Insufficient free system resources
 - Not having run the program utilities
- Resolution:
 - Clean up the hard drive
 - Restore a backup; run repair and compact on it and try to rerun the updatedb.mdb



Invalid Page Fault In Module MFC42.DLL

- This error indicates that the program cannot find the database
- Rights, Permissions, Ownership
- MFC42.DLL is the incorrect version
- Hardware failure between the PC and Server
- Mapping or network configuration issues
- Damaged network connection



Invalid Page Fault...

- Pointing to incorrect database (are you pointing to the correct database or last years database?)
- Trouble writing to the hard drive.
- NT ownership of database/permissions or case sensitivity on an NTFS partition
- Insufficient hard drive space
- Database corruption



Printing Errors

- Printing issues are usually a result of users not printing to the default printer or using incorrect print drivers
- Common printing errors:
 - Printing off the right hand side of page
 - Page breaking incorrectly
 - Instead of text a series of vertical and horizontal lines are printed





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“Everything Else”

Other Issues



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SYSADMIN User ID

- Define password for SYSADMIN upon initial logon following full install or password reset
- Reserve SYSADMIN for administrative purposes (clearing locks, security); do not use for everyday processing tasks
- Record and retain password for SYSADMIN in safe and reliable place



Changing Database Location

- EDEExpress 5.x and above uses DAO (Data Access Object) drivers to communicate with database
 - Database location stored in Registry rather than odbc.ini
 - Tool to change database location provided within EDEExpress



Changing Database Location (cont.)

- Where to change database location
 - Within EDEExpress if the database is missing or has been renamed.
 - Within EDEExpress if the database was copied.
 - Within the Registry Using Regedit or Regedt32 commands.





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Changing Database Location Within EDEExpress

- From the Help\System Information menu choose Files Information tab
- Click Registry
- Using + signs and folders click on the path: EDESuite\Year01\Express
- Choose edit from the edit menu and enter new path
- Close EDEExpress and reopen it



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Using Regedit/Regedt32 to Change Database Locations

- We do not recommend this method of changing your database location
- If you have no other options then contact your System Administrator or CPS -R&R (research and resolution) team for assistance



Clear Files/Clear Locks

- Clear Files clears all data from a selected database table
 - Accessed from Tools|Utilities|Clear Files
 - Can now only clear some databases
- Clear Locks is separate from Clear Files
 - Record Locks Database
 - **Clear record locks for a single user**
 - Accessed from Tools|Utilities|Clear Locks





Missing/Duplicated Extensions

- File box under import does not display the file extensions
- File extensions are duplicated (sara01bk.004.004)
- File extensions will not automatically increase incrementally





Respect Your Database

- Meet the hardware requirements
- Use surge protector with modem protection
- Maintain adequate free hard drive space
- Spend some time reading installation and setup instructions and tips
- Limit multi-tasking





Respect Your Database (cont.)

- Exit programs and shut down gracefully
- Maintain a Production Schedule
- Backup, Backup, Backup
- Use Virus Protection
- Attend Session 11, EDExpress from a School's Perspective



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Production Schedule

- Avoid database damage: always schedule global activities at times when no other users are accessing the database
 - Receive/Import early in the day
 - Do update functions during the day
 - Export/Send data late in the day





Further Assistance

CPS Customer Service

800/330-5947 Fax: 319/358-4260

SFA TECH:

<http://www.ed.gov/sfatech/listserv.html>

E-mail: cps@ncs.com



TDD/TTY: 800/511-5806



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Questions?



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