

MICRO FOCUS SERVER EXPRESS™

Micro Focus Server Express is the platform of choice for deploying e-business and distributed applications. Server Express accelerates enterprise COBOL application performance to the next level, providing the fastest ever Micro Focus COBOL product for UNIX.

OVERVIEW

Building Next Generation E-Business Applications

Specifically designed for performance and reliability to support high-volume transaction processing applications, Micro Focus Server Express™ is the platform of choice for deploying e-business and distributed applications. Server Express accelerates enterprise COBOL application performance to the next level, providing the fastest ever Micro Focus COBOL® product for UNIX. Server Express helps to dramatically reduce deployment costs and provides increased service levels through state-of-the-art capabilities like AppTrack and FaultFinder.

Scaleable Solution for Enterprise Development and Deployment

Server Express can be combined with Micro Focus Net Express® to provide a highly productive GUI development environment on Microsoft Windows with the outstanding scalability of both NT and UNIX for deployment. Applications can be developed easily with Net Express and then rapidly deployed using Server Express. When used with Server Express, Net Express simplifies UNIX deployment through publishing to UNIX and remote debugging.

Improved Productivity and Application Support

Remote debugging and production debugging enhancements enable advanced e-business and Web applications to be debugged with ease, directly on the deployment server, making it easier to develop and deploy robust, high performing Web applications.

The introduction of OpenESQL™ in Server Express gives database and platform independent SQL access through ODBC with the simplicity of EXEC SQL statements. OpenESQL applications can be rapidly generated using the Net Express OpenESQL Assistant™ and easily deployed on the UNIX system of choice. This approach offers improved choice, increased productivity and great flexibility.

Server Express provides unlimited scalability, supporting COBOL data file sizes in the terabytes, enabling large-scale application development to support business growth into the next millennium.

Quickest Path to 64-bit Application

Server Express was designed for today's 32-bit and 64-bit operating system architectures. With Server Express (64-bit Edition), you are just one simple step away from a 64-bit COBOL application! ⁽¹⁾

Compatible with Existing Micro Focus UNIX Applications

Server Express was specifically engineered to be compatible with existing Micro Focus COBOL applications. Most applications only require recompilation to take advantage of the advanced performance and capabilities of Server Express.

HIGHLIGHTS

State-of-the-Art COBOL Compiler

Server Express includes a state-of-the-art compiler that builds on COBOL's traditional strengths by providing:

- High-performance native code that can be optimized for peak performance on specific hardware like the leading IBM and Sun platforms
- Extensive COBOL dialect support, simplifying reuse of existing applications and leveraging existing COBOL programming skills
- Scalability, ranging from workstations to multi-processor UNIX systems
- Full support for object oriented application development
- A portable object file format for easily deploying applications on leading server platforms utilizing Micro Focus Application Server™
- Fully portable multi-threading capabilities, leveraging modern operating system threading capabilities to provide optimum application performance

Server Express is built using the latest Micro Focus COBOL callable shared object technology. This new executable format provides fast execution and delivers immediate productivity gains. With Server Express, you can also take advantage of this powerful new format by recompiling your existing COBOL application, enabling your multi-user application to run faster and perform better.

Advanced Debugging with Animator®

Micro Focus Server Express provides debugging capabilities needed to find and resolve problems in code quickly. Animator within Server Express provides:

- Debugging of all Micro Focus COBOL executable file formats including native code and shared objects
- Full control over the debugging process. You can single step, run to a particular location and reset the execution point to any statement in your code
- Ability to examine and change any data item in the program during execution (ASCII or EBCDIC format)
- Just-In-Time (JIT) animation – if your application fails while it is running, Animator can be automatically started at the point in the source code where the error occurred, allowing you to quickly determine and correct the error
- Multi-threaded application debugging – freeze, thaw, or activate specific threads. Set breakpoints within threads. You are in complete control!
- Simplified mixed language debugging – Animator works with your system debugger to enable you to quickly and easily debug mixed language applications

- Dynamic attachment to your COBOL program – use Animator to dynamically attach to your executing programs at any time
- UNIX “core” debugging – use Animator to analyze a UNIX “core” dump created when a COBOL application failure occurs

Once you have determined what caused an error in the program, you can edit it quickly and easily with a single keystroke — Server Express Animator is fully integrated with the Server Express full screen source code Editor.

COBOL FOR THE WEB

Micro Focus Server Express brings the power of COBOL to the Internet by enabling COBOL programs to process HTML forms dynamically using familiar ACCEPT/DISPLAY syntax or embedded HTML. This allows you to develop and debug portable Web server applications that can be targeted at many different production platforms. There's no need to invest in, or use, any other server scripting language — you can do it all in COBOL!

High-Performance Web Applications

A key element for providing optimum performance on today's Web servers is the ability to create executables that exploit all the performance capabilities of the production server. Server Express enables you to do this very easily by providing simple compile and link directives so, from a single source stream, an application can be built for deployment as a:

- CGI application for use on any Web server
- NSAPI shared object for use on Netscape Enterprise Server

Using COBOL with Java

Server Express provides the ability to deploy applications that support COBOL/Java interoperability created using the wizards in Micro Focus Net Express. Applications can be created and deployed without the programmer Java Native Interface (JNI) API's.⁽²⁾

FaultFinder

When applications fail in production you often cannot use your regular debugging techniques to locate the problem. You don't have the source code available or you cannot easily reproduce the problem. FaultFinder is designed to provide you with the help you need in these critical situations. It provides you with a snapshot of your application just at the point where the application failed, and provides fully configurable and comprehensive fault diagnostic information including:

- Detailed analysis of your execution environment including environment variables, configuration options, and switch settings
- A snapshot of the data files being processed and their file descriptors
- Threading information, active programs (call stack) and their parameters
- Loaded programs and associated data
- Operation at which the application aborted and a history of other operations performed prior to failure

FaultFinder has been extended so it can be used before a problem has occurred. It can be invoked from an active program via a call statement or from the command line to be attached to an active process. In addition to the information listed above, FaultFinder also reports on memory allocation and usage by the various modules in the application.

COMPREHENSIVE DATA ACCESS OPTIONS

COBOL File Handling

With Server Express, you can harness all the power of COBOL's flexible, high-performance file handling system. Server Express supports COBOL data file sizes in the terabytes, providing you with the scalability you need for today's data intensive, large server applications. Micro Focus Fileshare™ extends COBOL data file processing to provide networked file access, transaction logging and recovery as well as two-phase commit capabilities without having to modify your application to use a relational database.

Integrated Data Tools

Developers constantly manipulate data for various test scenarios or to repair data records. Server Express includes useful data tools for examining and changing data files:

- Data File Editor lets you examine data files to see how an application has updated them, or create and edit a file to provide test data for an application
- Rebuild enables you to quickly repair corrupt index files as well as providing you with the ability to quickly and easily change data file formats
- Codecomp Utility for EBCDIC/ASCII character set translation enables you to customize character mapping tables

SQL Database Options

Server Express works with all leading relational databases including Oracle, Sybase, Informix and IBM.

Server Express supports native access to DB2,³ as well as integrated support for the latest pre-compilers from Oracle, Sybase and Informix. In addition, Server Express provides OpenESQL,[™] a database independent SQL access capability which requires no pre-compiler.

OpenESQL

OpenESQL transparently translates embedded SQL statements into ODBC API calls, allowing you to easily develop applications that access different database systems. Server Express comes with the high-performance DataDirect Connect ODBC™ drivers you need to access the leading relational database systems. In addition, OpenESQL for Server Express is fully compatible with OpenESQL in Net Express, providing you with a platform independent, database independent, SQL option without the need to purchase costly pre-compilers. OpenESQL availability is dependent upon ODBC drivers being available for your UNIX platform.

SIMPLIFIED MIDDLEWARE

Plug-and-Play Networking

Server Express provides powerful network programming capabilities for the COBOL programmer. Client/Server Bindings provide a lightweight Remote Procedure Call (RPC) mechanism that enables communications between client/server applications running on different machines. Using a simple interface, programmers can develop complex distributed COBOL applications in a fraction of the time it would normally take using other programming techniques. In addition to Client/Server Bindings, it can be used with BEA Systems Tuxedo and other leading middleware packages.

User Interface Design and Development Tools

Server Express includes Dialog System™, enabling COBOL programmers to rapidly prototype, develop and deploy scaleable character-based user interfaces that are portable across different UNIX platforms. Dialog System isolates screen and keyboard logic from the application code, significantly reducing the size and complexity of the application code.

Application Management and Usage Monitoring

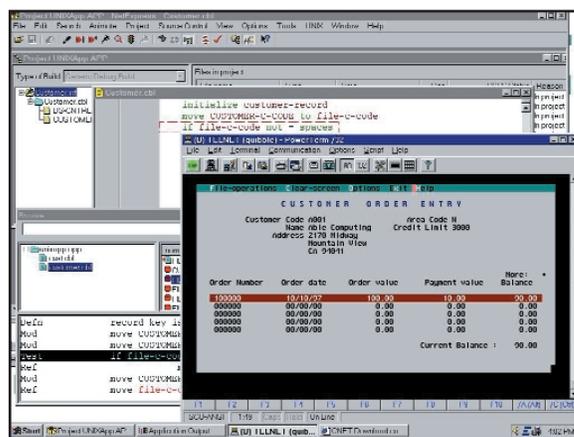
AppTrack™ provides a simple, cost-effective system for tracking COBOL application usage. It will help you monitor usage of your application inside your organization, or if you are an ISV/VAR, help you ensure that your customers are purchasing the correct number of licenses for the number of users on the system. Its advanced features include:

- Centralization of all license administration through an easy to use, menu driven interface
- Implementation of a complete license management system without any application code changes
- Automatic notification when a customer attempts to use your application without sufficient licenses

NET EXPRESS AND SERVER EXPRESS — A WINNING COMBINATION

Net Express and Server Express combine to take enterprise COBOL to the next level. With the Net Express state-of-the-art COBOL development environment and the advanced COBOL deployment capabilities of Server Express you can quickly develop, debug and deploy mission-critical client/server or Web Applications for a distributed enterprise environment. By utilizing Net Express with Server Express, the enterprise COBOL programmer benefits from:

- An advanced graphical development environment
- A powerful set of developer productivity tools including an Internet Application Wizard, Script Assistant, Client/Server Binding Wizard and OpenESQL Assistant
- A common development environment for Windows NT and UNIX based COBOL applications
- Remote debugging capabilities enabling Net Express to debug COBOL client/server or Web applications running on UNIX
- A simplified UNIX deployment capability to quickly and easily transfer to UNIX and build any Net Express project
- Simplified access to UNIX combining a powerful UNIX color terminal emulator (PowerTerm) and seamless file and printer access with SAMBA



Remote debugging a UNIX COBOL application with Net Express.

Micro Focus is the industry leader in COBOL development solutions ranging from traditional maintenance and program understanding to business rule mining, Web-enablement and user-interface transformation. Over 70,000 licensed users at more than 7,000 sites around the world use Micro Focus' unsurpassed breadth of platform support, performance and scalability. Micro Focus offers the most comprehensive suite of development and integration environments to help customers succeed in taking full advantage of the power of their legacy systems. Founded in 1976, Micro Focus is a global company that employs more than 450 people worldwide with principal offices in the United Kingdom and North America. For more information, visit www.microfocus.com

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¹ 64-bit COBOL applications require a 64-bit Edition of Server Express. Please contact Micro Focus for product availability.

² Java support is not available on all Server Express platforms. Please contact Micro Focus for specific platform details.

³ Requires the DB2 precompiler services supplied by IBM.

