Enterprise Server

Organizations face constant pressure to deliver innovation, improve efficiency, and maximize the value within their mainframe applications—all while managing costs. Mainframe rehosting is a safe, proven and cost efficient way to modernize business critical workloads to support future innovation, market growth and expansion into new geographies.

Business Challenge

Some organizations that use IBM mainframes have sought to optimize production application workload deployment across traditional mainframe environments and a range of other servers. This approach helps the enterprise adopt a 'fit for purpose' mainframe business application model, whereby they can reach new markets or geographies through developing and maintaining a single application, and moving that application to the platform that best fits the requirements of the individual business unit. Micro Focus refers to this production optimization practice as mainframe application rehosting. This proven approach supports a wider strategy to enable operational flexibility while increasing overall processing capacity and managing IT costs. Mainframe application rehosting has helped many organizations reduce annual operating costs by up to 90%.

The key to successful mainframe application rehosting projects is minimizing change to avoid unnecessary risk, while moving to an agile environment that can support future growth. The benefits are potentially compelling, but are unlikely to be realized unless the underlying technology can:

- Deliver the performance and transaction throughput required by the business

- Meet Reliability, Availability and Serviceability (RAS) expectations
- Fully integrate with the security infrastructure to provide appropriate application and system level security
- Enable IT to proactively manage the health of the systems in production
- Access mainframe transactions and data that must remain on the mainframe
- Provide a flexible architecture that enables IT to respond rapidly to new business demands

Product Overview

Micro Focus® Enterprise Server® provides a high performance, scalable, deployment environment for rehosting applications that have traditionally run on IBM z/OS (MVS) or z/VSE environments. It also provides the infrastructure to support the integration of these applications with modern technologies such as .NET, J2EE, or SOA to better satisfy evolving business requirements.

Enterprise Server delivers a batch execution and transaction environment that supports IBM COBOL, IBM PL/I[1] IBM JCL batch jobs, IBM CICS and IMS TM transactions, web services and common batch utilities including SORT. It also includes support for IMS-DB and mainframe data file formats.

Quick View

Micro Focus Enterprise Server provides an application deployment environment for rehosting IBM mainframe applications that have traditionally run on IBM z/OS environments. Providing the modern infrastructure to integrate mainframe applications with .NET, Java, and SOA, as well as supporting the latest distributed, virtual and cloud platforms, Micro Focus Enterprise Server delivers a fast return on investment enabling the enterprise to transform its mainframe applications to fit its business strategy. Enterprise Server supports:

- Mainframe application deployment to IBM LinuxONE, Linux (Intel and Power), Windows, UNIX, and the Cloud (Private and Public)

- New for 4.0—Docker Container Support

- Replication and expansion of existing mainframe applications to new platforms

- IT cost reduction by as much as 90%

- Production-grade application reliability, availability, and serviceability (RAS)

- Mainframe application modernization using .NET, Java, SOA and Cloud technology

Windows Server 2016

Certified

The result is a single integrated deployment environment that provides the batch and transaction processing required to execute mainframe applications on Linux (x86-32/64-bit, Power or IBM LinuxONE), UNIX and Windows servers[2]. This enables core online and batch applications to be reused with minimal change on a more cost effective platform on premise or in the Cloud (AWS, Azure, etc.). This approach also preserves the competitive advantage contained in the mainframe application logic supporting business practices that are the result of decades of innovation and investment.

While Enterprise Server supports the deployment of the mainframe application, its companion product Micro Focus Enterprise Developer® supports the ongoing development life-cycle and modernization of these mainframe applications, providing a single development environment that can deploy to multiple platforms. This capability enables customers to simultaneously develop, test and deploy their applications to the mainframe and to Enterprise Server on their platform of choice.

Key Benefits

Replicate trusted, core mainframe applications on distributed, virtual or cloud platforms to satisfy specific business requirements such as:

- Regulatory compliance projects which dictate that customer data must be kept within a country
- New market entry where the client base does not run mainframe technology
- Exploit the price and performance benefit of powerful, competitively priced processors to reduce annual operating costs by up to 90%
- Redistribute suitable application workload to contain or reduce MIPS on z/OS, in order to delay or avoid upgrades required to add processing capacity and to reduce MLC

- Duplicate discrete functions, like pricing quotes, to service new market requirements more effectively. For example, aggregator market quote fulfilment
- Provide continuous service during scheduled mainframe downtime
- Bring disaster recovery implementations in-house instead of using costly outsourcing services
- Shrink batch cycle times by taking advantage of the processing power of lower cost processors
- Deliver equivalent Quality of Service (QOS) levels at reduced cost
- Provide better reporting, business intelligence and ad hoc reporting capabilities

Technical Benefits

- Reduce risk—applications behave in the same way they did on the mainframe because the original code defining existing online and batch business processes is reused
- Complete modernization projects faster, as applications can be moved with minimal change
- Utilize mainframe compatible security models for authentication and authorization
- Provide mainframe level RAS on open systems
- Support modernization via new web or graphical user interfaces that reuse traditional interfaces
- Improve agility, as proven business functions can be exposed and executed as web services for easier reuse within strategic architectures such as .NET, J2EE or SOA
- Increase flexibility and future-proof business assets, as applications can be moved to popular Linux, UNIX or Windows

environments to simplify business process integration demands
- Explore the potential benefits of deploying traditional mainframe applications into Private and Public Cloud environments

Feature Overview

Complete COBOL and PL/I Application Rehosting and Deployment Environment

- COBOL and PL/I run time support, dynamic debugging and diagnostics
- Job Execution System (JES) engine to execute existing JCL CICS and IMS TM transaction system support to rehost online systems and screens
- Support for CICS WEB Services—COBOL
  - CICS Transactions can be exposed as service providers or requestors
- Built-in administration, monitoring and control as well as integration with third-party operations management tools

Comprehensive Data Access Capabilities

- File handler that supports VSAM and QSAM file types, Partitioned Datasets (PDSs) and
- Generation Data Groups (GDGs) High Availability File Support—High Availability option for replication of critical VSAM data
- Support for Microsoft SQL Server when rehosting applications to Windows servers
- Support for IBM DB2 and Oracle 11g databases on Linux, UNIX and Windows
- An IMS DL/I compatible database to rehost IMS-DB applications without updating data model or application code
- Remote access to mainframe data during gradual workload redistribution projects via any popular third-party middleware, in products like Microsoft BizTalk, IBM DB2 Connect and Alebra PDM zOpenGate
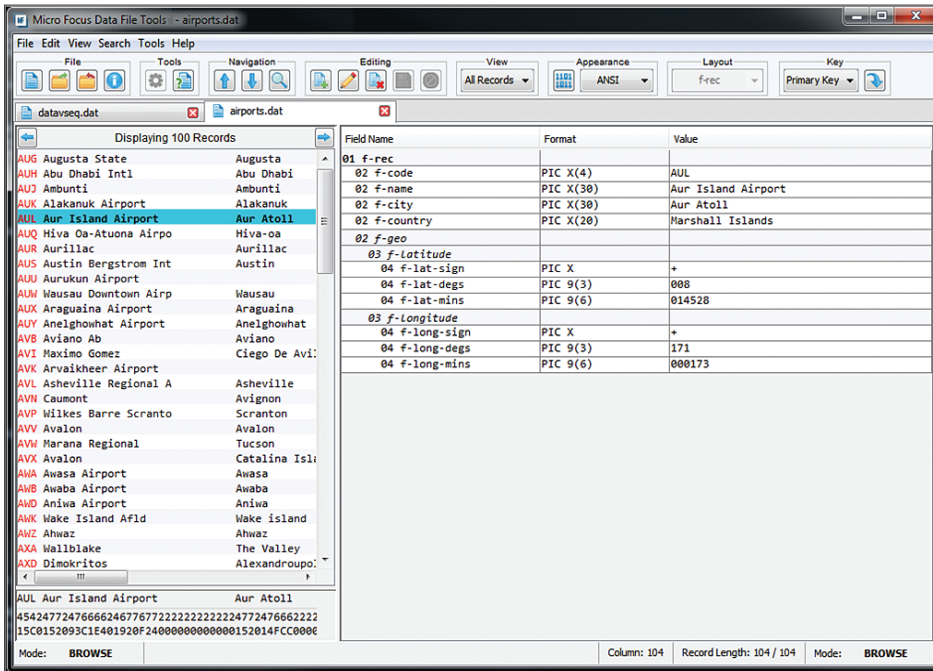- Data File Editor for secure browsing and editing of datasets

Figure 1. Data File Editor

Support for Data Transformation Initiatives While Minimizing Application Updates

- Host Compatibility Option for SQL Server (HCOSS) provides runtime support to minimize SQL updates when rehosting DB2-based applications to SQL Server

- Host Compatibility Option for DB2 (HCODB2) provides runtime support to minimize SQL updates when rehosting mainframe DB2-based applications to IBM DB2 on Linux, UNIX or Windows

Mission-Critical Deployment Environment

- High performance and scalable deployment engine
- Infrastructure for RAS

- Flexible and comprehensive security options
  - Support for a RACF compatible security capability, to enable the reuse of existing mainframe security rules for authentication and application level authorization
  - Supports Long User Name and Password
  - Multi Factor Authentication (MFA)[3]

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1 Unless portability standards have been adhered to, some PL/I code updates will be required.
2 PL/I applications are not currently supported on Linux running on z Systems or Itanium-based servers.
3 Requires Micro Focus Security Server.

- Architected to support modernization on latest 32 and 64-bit environments:
  - Web services support
  - J2EE-compliant access to Java application servers
  - Support for popular Linux, UNIX and Windows platforms
  - Supports mainframe application deployment to the Public Cloud (AWS, Azure, etc.)
  - Supports deployment using Docker

- Connectivity to CICS z/OS from CICS systems running on Linux, UNIX or Windows:
  - CICS Inter-System Communication (ISC) including support for two phase commit

- Integration with popular third-party products:
  - Job schedulers
  - Print management
  - Operations management

- Proven implementation methodology

- Award-winning global product support

For more information about Enterprise Server, visit: **www.microfocus.com/products/enterprise-suite/enterprise-server/**

System Requirements

- Windows 7
- Windows 8.1
- Windows 10
- Windows Server 2008 R2 SP1
- Windows Server 2012
- Windows Server 2016
- SUSE Linux Enterprise Server
- Red Hat Enterprise Linux
- Oracle Linux
- Oracle Solaris
- IBM AIX

"We estimate that the Micro Focus solution in a Linux environment runs at 10–20% of the original IT operating costs, so a saving of 80 to 90% of the mainframe costs which translates to full ROI within two years."

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