

DATA SHEET

BUSINESS CHALLENGE

Many organizations rely on mainframe applications to run critical parts of their business. The functionality delivered by these applications, and the way that they are used, has changed significantly since their introduction. Today these applications, developed over decades, continue to provide core business services and are increasingly important as the business and customers demand more and better services.

But it's not just services which are in demand. Businesses expect to maintain a positive reputation by avoiding damage from high profile IT incidents, which means that they want instant updates as well as low costs. Rapidly delivering high volumes of change while maintaining quality requires sufficient test resources. For many mainframe organizations, this is a significant issue.

Historically, mainframe testing resources were allocated when production demand was low - typically evenings and weekends. In a 24x7 global economy, with every mobile device a potential user - making agile and DevOps a rule not an exception - periods of low production use are infrequent and difficult to predict. So for many organizations, testing resources are scarce and difficult to schedule with availability determined by the need to manage cost.

The result is that testing resources are now a significant bottleneck in delivering the essential updates that the business demands within the required timescales. The stark choice is between the restriction of testing based on available resources and compromising application quality - and possibly business reputation - or having a rigorous test schedule that delivers late, compromising business advantage. Neither option is acceptable.

PRODUCT OVERVIEW

Micro Focus Enterprise Test Server is a mainframe application execution environment that runs on Windows and addresses the issue of mainframe testing resource availability. Applications running under Enterprise Test Server behave just as they do on the mainframe, making it possible to perform a variety of testing activities on low cost hardware or the Cloud.

It exponentially expands the test capacity and enables testing to scale up easily to meet delivery timelines driven by business demands.

Enterprise Test Server supports IBM COBOL, Assembler, CICS, IMS-TM, JCL, DB2, IMS-DB, z/OS file formats and standard mainframe utilities. Application source code and appropriate subsets of production data are copied from the mainframe and the source is compiled on Windows. The application is then executed within the Enterprise Test Server environment where it accesses the data subsets locally to maximize performance. If data or application logic needs to remain on the mainframe, for example called sub-routines without source code, then these can be accessed directly from within Enterprise Test Server using mainframe client access tools.

Stakeholders who are developing composite applications that use mainframe resources can conduct their testing by having access to applications running within the Enterprise Test Server environment. These include developers, test teams, quality assurance engineers, end users, and non-mainframe Java or .NET programmers. This requires access to little or no mainframe processing power.

KEY BENEFITS

Testing capacity/time-to-market

- Speed up and increase quality of complete testing phases, as test cycles are not constrained by scarce mainframe processing power
- Scale up test capacity quickly to meet business driven deadlines or significant business change
- Expand the test environment beyond traditional test teams to include business users and developers integrating SOA applications with the mainframe.

Cost containment/reduction

- Scale up test capacity on a low cost commodity platform without the substantial investment in new mainframe MIPS
- Reduce mainframe MIPS consumption as more testing is performed on Enterprise Test Server.

Quality

- Identify issues sooner in the development cycle by testing earlier and reduce costly rework
- Improve quality by increasing the testing that can be accomplished in shorter time frames
- Accelerate innovation by providing Java or .NET programmers with a more responsive and accessible environment to perform testing.

FEATURE OVERVIEW

Support for a wide variety of mainframe applications

Enterprise Test Server includes a comprehensive set of tools and capabilities to enable mainframe COBOL applications to run on Windows. These include:

- Batch applications with JCL controlling the execution of COBOL programs accessing DB2 and IMS databases or VSAM files
- Online CICS or IMS TM applications accessing DB2 and IMS databases or VSAM files
- Mainframe COBOL applications accessed via:
 - 3270 BMS or MFS screens
 - CICS Web Services

COBOL CICS Transactions can be exposed as service providers or requestors for end-to-end testing:

- Java or .NET applications using facilities like CICS Transaction Gateway (CTG), EZASOKETS, IMS Connect or MQ Series to connect to backend services
- Mainframe Assembler applications or sub-routines which can be assembled and linked for execution within the Test Server environment
- Composite applications where .NET or Java applications on Linux, UNIX or Windows invoke mainframe COBOL programs.

Close integration into mainframe resources and sub-systems

Enterprise Test Server includes direct mainframe access capabilities, so mainframe code and data can remain on the mainframe and be accessible from within the Enterprise Test Server environment.

Benefits include:

- Seamless but secure access to mainframe application source code and data resources
- Automated source synchronization and compilation between mainframe and LAN development libraries, including access to common host configuration management systems such as CA-Endevor, Panvalet and Serena ChangeMan ZMF

- A wider range of applications that can be tested within the Enterprise Test Server environment as jobs, programs and utilities that cannot be rehosted to Windows, can be accessed remotely on the mainframe.

Support for data access on Windows

Enterprise Test Server includes a range of tools and capabilities to enable applications to run against test data on Windows rather than the mainframe. Key capabilities and features include:

- Mainframe compatible file system that supports VSAM file types (KSDS, RRDS and ESDS), as well as Partitioned Datasets (PDSs) and Generation Dataset Groups (GDGs)
- Mainframe compatible DB2 and IMS DB database support
- Data file and database editors to enable developers and QA engineers to define data structures and insert, update or delete data records quickly and easily to support testing on Windows
- Full EBCDIC character set support to ensure compatibility with the mainframe environment
- Mainframe access capabilities to support direct COBOL file access to data files physically hosted on the mainframe.

Enables testing to be conducted off the mainframe

Once configured, Enterprise Test Server can be used to support many types of testing while completely removing or significantly reducing the need to use any mainframe resources:

- Significant portions of Quality Assurance testing including functional regression tests, batch tests and manual testing, can be conducted against applications running on Windows
- Most user accept testing (UAT) can be conducted against the applications running within the Test Server environment, with end-users oblivious to the fact that the applications are actually executing on Windows
- .NET or Java programmers can conduct unit testing against mainframe applications running under Test Server rather than the mainframe
- Selected performance and benchmarking activities can be conducted on Windows once base line metrics have been established.

TECHNICAL SPECIFICATIONS

Recommended Windows operating system requirements:

- Windows 7, Windows, 8, Windows 10, Windows Server 2008 and Windows Server 2012.

For additional information please visit: www.microfocus.com