

FRAME

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- ▶ **Many companies continue to rely on Mainframes to run their core business applications, because they believe there are no other alternatives when performance and reliability are essential.**

With XFRAME, it is possible to run the same core applications at a fraction of the cost and without compromising speed or system integrity. XFRAME legacy applications can be re-hosted on running systems like UNIX, Linux or Windows, while still maintaining full functionality and business logic.

Re-hosting on open systems offers a significant cost reduction and provides a new flexible platform that caters to the ever changing business needs. In addition to XFRAME, HTWC provides a suite of tools that make the entire migration process fast, low-risk and extremely cost effective.

Mainframe applications on open systems

XFRAME provides a scalable, reliable, and high-performance framework that runs programs written in COBOL, PL/I and C languages on UNIX, Linux or Windows. It contains a transaction server to execute CICS and IMS/DC applications and a complete batch environment to run Mainframe batch processes from z/OS and VSE systems.

XFRAME supports the most important Unix, Linux and Windows compilers for COBOL, PL/I and C as well as many standard middleware solutions such as, IBM WebSphere MQ and LDAP servers. Through its XA interface, XFRAME supports popular databases such as, Oracle, IBM DB2 UDB, MDB2, SQL and open-source databases like MySQL.

Java technology is highly integrated onto the XFRAME platform, allowing you to

mix legacy programs with Java classes. TCP/IP and SOAP based services offer the possibility to deliver legacy services across the enterprise, providing the foundation for developing modern infrastructures such as a Service Oriented Architecture (SOA). With a complete set of tools and utilities, along with support for a wide range of target platforms, XFRAME offers the most complete re-hosting solution on the market today.

XFRAME from HTWC can help your business

Re-hosting mainframe applications on lower cost open platforms offers several advantages over a complete application reengineering or over maintaining the current mainframe environment. In a re-hosted environment you reuse and maintain your investment in existing business logic and applications, while opening the door to a new, open, low cost and scalable infrastructure that can be easily extended. Because the applications are maintained intact, current development and administrative resources can easily adapt to the new environment with minimal retraining

Mainframe re-hosting with XFRAME can significantly cut hardware acquisition and maintenance costs, offering the ability to choose from many vendors and options, in contrast to the closed, proprietary mainframe environment. Most importantly, re-hosting with XFRAME from HTWC offers these advantages in a solution that provides the same, or better, reliability, performance, and scalability as the legacy environment.

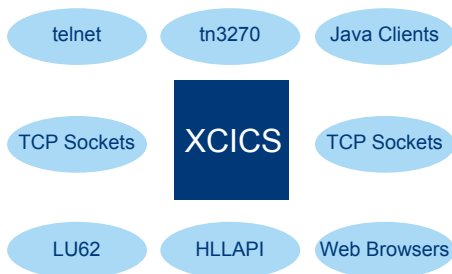
Key Features Highlights

- ▶ Available on UNIX and Linux and Windows
- ▶ Runs mainframe applications almost unchanged
- ▶ CICS compatible TP monitor IMS DB/DC compatibility toolkit
- ▶ Rich batch environment, supporting a large set of mainframe facilities
- ▶ DFSORT compatible SORT utility
- ▶ Smart data conversion toolkit
- ▶ Wide set of direct connectors for remote application via TCP/IP and SOAP
- ▶ Full SNA/APPC connectivity
- ▶ COBOL, PL/I, C & Java support
- ▶ Sun MTP import facility

► **XCICS/TS is the CICS-Customer Information Control System compatible TP monitor of the XFRAME® platform, designed for UNIX, Linux and Windows architectures, to natively supports IBM CICS applications.**

Its architecture, based on a shared pool of server processes, guarantees the highest performances on UNIX/Linux/Windows systems, while ensuring stability and transaction integrity. XCICS supports an extensive set of the features provided by IBM CICS/TS, plus a set of unique features.

XCICS pre-compiler grants the full source compatibility with mainframe applications: it is only necessary to recompile the original CICS source programs to let them run under XCICS.



A large set of connectivity protocols is supported by legacy ones (i.e. SNA/LU62) to modern ones (i.e. Web Services).

XCICS ensures data and transaction integrity with such features as data recovery and warm and cold start.

The XA interface grants connectivity to relational databases such as; Oracle and IBM UDB, as well as ODBC data sources such as; MySQL and Microsoft SQL Server.

The integrated cross-platform terminal emulator combined with XFRAME provides centralized configuration and session deployment, in addition to a set of enhanced features on the client side.

Users may also continue to work with the usual terminal emulator and also avoiding to retrain the operators.

In systems where Mainframe concepts are still used such as; FCT, PPT, etc., system administrators will find it easy to work with XCICS.

Configuration is defined through simple text files and a graphical interface utility is provided to remotely administer one or more XCICS instances from a PC desktop.

XCICS also provides advanced programming and debugging features which accelerate development and testing, for example:

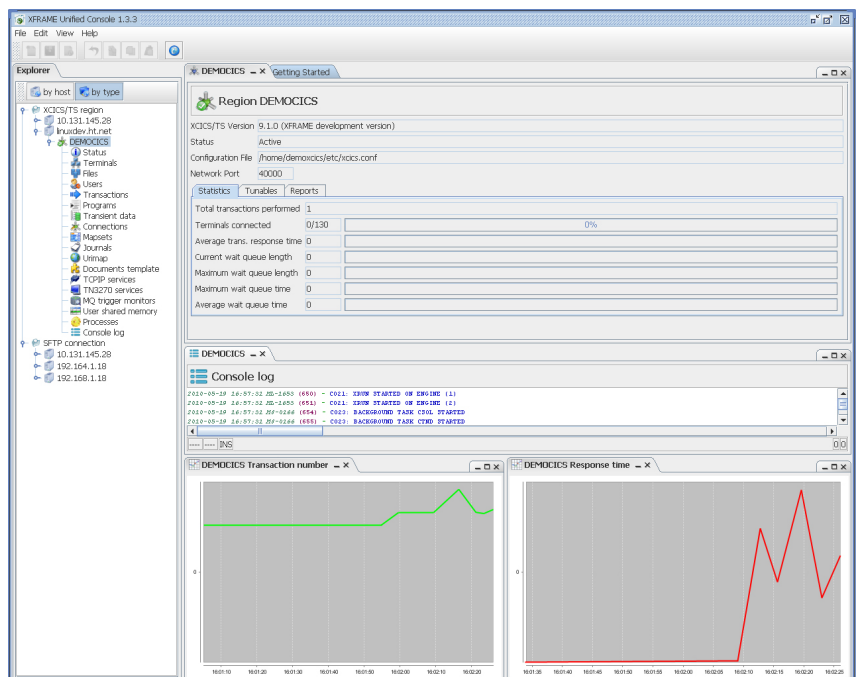
- transaction log tracking
- step-by-step program animation
- interactive dataset editor
- manual and automatic new copy functions

XFRAME offers a unique IMS/DC compatibility toolkit that allows XCICS to host applications written for IMS/DC, while leaving their code intact. XFRAME Java Environment (XJE) APIs and J2EE

XCICS Features Highlights

- Full IBM CICS source compatibility
- High performance scalable architecture
- Transaction integrity/recovery
- Full BMS
- Temporary Storage & Transient Data
- File services
- Program & Transaction services
- Multiple DB connectivity
- Inter-System Communication
- TN3270 Server
- Easy configuration
- Remote GUI based administration
- JSP based web wrapper

Connectors guarantee immediate re-use of existing application logic and the integration of new technologies via TCP/IP or Web Services.



- ▶ **Efficient and reliable execution of batch applications is critically important for many mainframe users.**

Batch Features

XFRAME provides a complete batch environment for re-hosting mainframe batch applications, with full support for legacy features including JCL conversion and replacements for VSAM, SORT, SPOOL and much more.

Using XJCONV, the XFRAME programmable Job Control Language converter, batch jobs coming from z/OS, OS/390, MVS, and VSE can be automatically translated into UNIX, Linux and Windows shell scripts.

XFRAME offers the key advantage of creating native shell scripts that preserve the original mainframe logic, simplifying testing and maintenance. XVSAM, XFRAME's powerful VSAM emulator, provides a full VSAM emulation layer.

In addition, utilities are provided that offer the same functions of the original legacy tools such as; IDCAMS, IEFBR14, IEBGENER, and others. XSORT is a fully-featured sort utility, which accepts the same input data cards as IBM DFSORT, providing features like INCLUDE, OMIT, FIELDS, OUTREC and more.

XBM - XFRAME Batch Manager

XBM is an industrial-strength scheduling/workload manager solution for Unix, Linux and Windows systems. Even if it is not mandatory in a re-hosting project, XBM is the ideal add-on for the XFRAME Batch Environment, because it is designed to handle re-hosted applications, reproducing by default some of the MVS/JES2 and VSE/POWER features. XBM provides execution engines (AKA initiators or partitions) to enable parallel job executions.

These engines facilitate batch process

control and system workload balancing. XBM can schedule jobs anywhere on the network according to planning, based on standard or customized business calendars.

Job initiation can also be dependent on several factors such as; the successful completion of previous jobs, the existence of needed files on any node in the network, user response to an XBM prompt or the availability of data resources.

XSPOOL-Web Spooling System

XSPOOL, another available option for XFRAME, provides additional functionality and flexibility. Through the XSPOOL batch interface, programs may send their printouts to the XSPOOL repository.

Once there, remote users may connect to the XSPOOL web interface with a standard browser and navigate, search and view their own printouts. Using the web interface, users can also change printout characteristics and print them globally or partially.

XFRAME is designed to be flexible and XEBE can be used in conjunction with most scheduling and spooling systems currently on the market. For customers that require a complete solution, XBM and XSPOOL are available as optional products.

With a broad range of standard and available features, XEBE is the most complete mainframe batch re-hosting solution available on the market.

Batch Features Highlights

- ▶ z/OS, OS/390, MVS & VSE jobs conversion
- ▶ Customizable JCL batch converter
- ▶ Pure Shell scripting
- ▶ Mainframe logic preservation
- ▶ Runtime VSAM support VSAM utilities support
- ▶ Legacy compatible SORT utility
- ▶ ASA & AFP printing support
- ▶ Dynamic PROC parameters substitution support
- ▶ XCICS integration for on-line generated jobs

XBM Features Highlights

- ▶ Mainframe-like initiators
- ▶ Manageable hold job queue
- ▶ Database based job tracking
- ▶ Log navigation and filtering
- ▶ Job chaining
- ▶ Event driven job activation
- ▶ Calendar based job submitting
- ▶ Cross system job control
- ▶ Operator alerts and notify via E-mail
- ▶ Command line interface
- ▶ Remote GUI based interface

XSPOOL Features Highlights

- ▶ Batch feeding system
- ▶ Web based printout distribution
- ▶ Browse, Search & View
- ▶ No client-side software

- **Cross Platform Availability: The only mainframe re-hosting solution** that provides complete functionality across Windows, UNIX, and Linux operating systems.

Cross Platform Availability

XFRAME runs on the most popular UNIX systems:

- Solaris (SPARC)
- HP-UX (PARISC & Itanium)
- AIX (PowerPC)

Linux (RedHat, Suse and others) are on the following architectures:

- i386 (Intel Pentium/Xeon)
- s390 (31bit z/Linux)
- s390x (64bit z/Linux)

Microsoft Windows Server 2003 is on the following architecture:

- i386 (Intel Pentium/Xeon)

Overview of HTWC

HTWC is one of the top leading European re-hosting, software conversion and application management solutions company. HTWC focuses on large organizations and is a valid aid in all those problem solving processes related to enterprise systems.

In particular, HTWC deals with all matters related to the integration and modernization of legacy environments.

HTWC has specialized in Mainframe re-hosting and software management solutions since 1987.

Currently, HTWC labs develop products for re-hosting analysis, migration, conversion and reengineering of legacy software. The integration of these products guarantees a reliable, flexible and cost effective solution for our customers.

Further Information

For further information on the XFRAME products, please visit our website at www.htwc.com or for specific questions, please contact us directly at info@htwc.com.

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