Information Builders

Web390 for OS/390 and MVS

Access Legacy Data and 3270 Applications From the Web

Web390 is a full-function MVS HTTP Web server offering secure access to traditional CICS, IMS/DC, TSO, and VM/CMS applications from any Web browser – without changing the 3270 applications or installing terminal-emulation software. The server's CGI support enables developers to write programs in REXX, COBOL, C, Assembler, or other common languages to expand the functionality of mainframe-based production systems by enabling them for the Web. Web390 integrates easily with Information Builders' WebFOCUS and Cactus for advanced reporting and application development, enabling customers to build powerful new Web applications that can access operational data throughout the enterprise.

Web390 adheres to the Internet Hypertext Transfer Protocol (HTTP) and TCP/IP standards, and it secures access to 3270 sessions through implementation of SSL security protocol.

Highlights

- **Offers secure access to IBM S/390 data and applications**
- **Requires no changes to MVS hardware, software, or data sets**
- **Exploits existing security packages (CA-TOP SECRET, CA-ACF2, and RACF)**
- **Supports SSL 3.0 encryption and decryption**
- **Offers three presentation modes for 3270 application screens on Web browsers: green-screen emulation, HTML translation, or customized HTML**
- **Supports Web-standard HTTP and TCP/IP protocols**

The new Web390 Gold™ version, introduced in Release 3.0, offers a suite of HTML/TP tools for customizing 3270 screens to optimize their presentation on the Web. Existing applications can be given drop-down lists, select boxes, radio buttons, and other HTML objects to improve their look and function, without changing the back-end 3270 applications.

Whether rejuvenating existing applications or creating new ones, Web390 enables mainframe sites to exploit the traditional performance, storage, and I/O advantages of MVS while delivering unmatched availability via the Web, with full integrity and security.

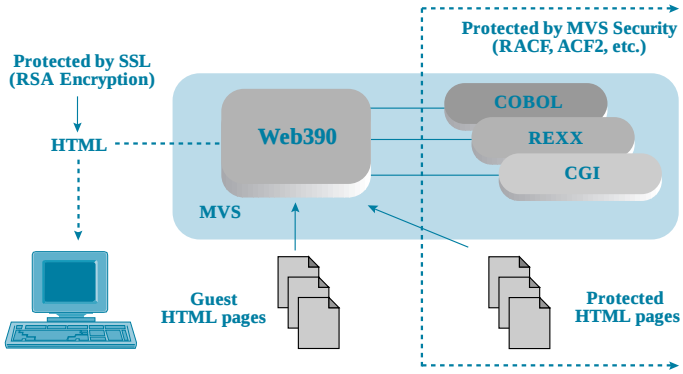
Create New Web Applications Based on Enterprise Data

The Web390 full-fledged HTTP server supports all popular Web file formats (MIME types), including Java, HTML, VRML, and GIF and JPEG graphic files, as well as MPEG animation files. It also supports the use of Common Gateway Interface (CGI) scripts, written in REXX, server-side JavaScripts, or 3GL languages such as C++, Assembler, PL1, and COBOL for accessing native MVS data. This broad language support facilitates rapid enhancement and exploitation of 3270 production systems on the Web.

Provide Application Interface Best Suited to Each User

Users can choose one of several presentation options at runtime. Those familiar with 3270 terminals but new to the Web can select 3270 Emulation Mode, which employs a Netscape Navigator plug-in to deliver the familiar 3270 green screens to the browser windows. Those familiar with the Web can select HTML Translation Mode, which automatically converts 3270 datastreams into HTML forms, allowing users to interact using familiar radio buttons and scrolling data entry windows.

Web390®



Web390 also supports user-written templates for customizing translated screen borders and adjusting certain screen elements, such as repositioning the pfkeys. To enliven static HTML pages, developers can also include dynamic HTML elements through Server-Side Include (SSI) variable substitution. Scripts written in REXX can automate Logon processing behind the scenes, or improve the look of 3270 applications by adding dynamic content through JavaScripts, 3GL programs, or REXX routines.

Develop Custom HTML Application Screens With HTML/TP

The HTML/TP feature delivered with Web390 Gold enables developers to customize the HTML screen forms that the Web390 Translator generates from 3270 datastreams. Developers can enhance HTML representations of 3270 application screens, adding graphics, select boxes, JavaScript validations, help screens, and more. Scripting support via HTML/TP enables sites to automate serial responses to 3270 screens, and provides a means of removing obsolete execution paths and comments. These facilities enable sites to upgrade legacy 3270 applications to reflect current usage patterns and redeploy them with the look and feel of true Web applications: and HTML/TP facilitates this customization of 3270 application user interfaces *without changing* the underlying 3270 applications themselves.

Web390 Supports Three Ways of Looking at 3270 Applications

Web390 offers 3270 green-screen emulation...

...or automatic translation of 3270 screens into HTML.

HTML/TP allows you to customize the HTML screens Web390 translates for the Web.

The HTML/TP Screen Customization Process

Within the menu-driven HTML/TP environment, developers navigate through 3270 applications selecting screens that require enhancement and generating replacement HTML screens and/or scripts. Screens slated for replacement by substitute HTML forms or scripted responses are identified with recognition rules. Web390 HTML screen translations serve as the starting points for customization. After customization with a text editor like ISPF, or any HTML editor, the click of a button enables their use in subsequent runs, potentially giving the underlying 3270 applications an entirely new look on the Web.

The two-step HTML/TP customization process features separate development and runtime environments, each with private but parallel PROFILE, REXX, and HTML libraries. Migration from development to runtime simply involves copying members over from the development libraries into respective runtime equivalents and bringing up the Web390 Gold runtime server.

Unmatched Security Inside or Outside the Firewall

Web390 provides unparalleled security for Web transactions, preventing unauthorized access to organizations' confidential information by:

- Authenticating USERIDs and passwords for all SAF-compliant mainframe security packages, such as CA-TOP SECRET, CA-ACF2, and RACF
- Controlling user access to mainframe resources at CGI level through users' security profiles
- Limiting user access by screening IP addresses
- Allowing definition of guest privileges at installation time to control deployment of information to general audiences

To secure transactions between browser and Web390 server that go outside the organization's firewall, Web390 delivers Secure Socket Layer (SSL 2.0 and 3.0) encryption/decryption support – the industry standard for secure transfer of data and files in TCP/IP environments. SSL works independently of Internet application protocols and, when implemented on both client and server, delivers fully secured commercial transaction processing to customers online.

Built-In Web390 Console for Operation and Administration

Providing Web access to mainframe applications does not mean giving up control. The built-in Web390 console facility offers a wide range of functions for managing users and server operations without interrupting their sessions. The console offers a single point of control and allows administrators to:

- Display active users
- Set file-mapping rules
- Control server operations
- Monitor server status
- Change MIME extensions
- Collect diagnostic information

Web390 at a Glance

Web Access to All Your Transaction Data

- Direct access to MVS, VM/CMS, TSO, or CICS
- Native MVS or OS/390 server (not UNIX-based)
- Executes in a single address space
- Provides modern look and feel for legacy applications
- Reduces costs of developing Web applications
- Provides centralized control of Web applications and Web activity tracking

Three Options for Displaying Applications on the Web

- 3270 Emulation Mode
- HTML Translation Mode – 3270 datastreams converted into HTML screen forms
- HTML Translation plus ability to customize translated HTML screens

Web Standards, Filetypes, and Protocols Supported

- TCP/IP – IBM and Interlink
- HTTP and HTTPS
- REXX and 3GL support for CGIs
- Dynamic loading of CGI modules
- Access to server-state variables from CGI scripts
- Automatic query string processing
- Server-Side Include support

Security Features

- Includes standard Internet security features – firewall, router, and IP mechanism
- Supports Secure Socket Layer (SSL 2.0 and 3.0)
- Offers option of requiring USERIDs and passwords, which are checked against MVS security packages
- Supports standard SAF calls
- Offers IP address screening using IPINCLUDE/IPEXCLUDE
- Configurable user groups
- Comprehensive monitoring and control facilities

Operational Features

- Persistent user profiles
- Full MVS operator controls for MIME types with server STOP, RESTART, CHECK ALIVE
- DISPLAY users
- On-the-fly updating of CGI engines
- Log switching
- Comprehensive trace facilities, including HTTP, HTTPS, VTAM, and TCP/IP
- TIMEOUT support for canceling inactive 3270 sessions

Logging Capabilities

- CERN/NCA common log format
- Log files automatically cycled

System Requirements

- IBM S/390: OS/390 MVS or MVS/ESA
- TCP/IP: IBM or Interlink

Web Browser Requirements

- Any Web browser for base server function
- Netscape (3.x or higher) or Microsoft Explorer (3.x or higher) required for (Emulation Mode) plug-in
- Browsers with JavaScript support for enhanced functions

Installation Requirements

- IBM-compatible PC with 2MB free disk space
- Ability to transfer binary files from the PC to the IBM mainframe

Information Builders

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