OC://WebConnect 6.2

a Whitepaper prepared by

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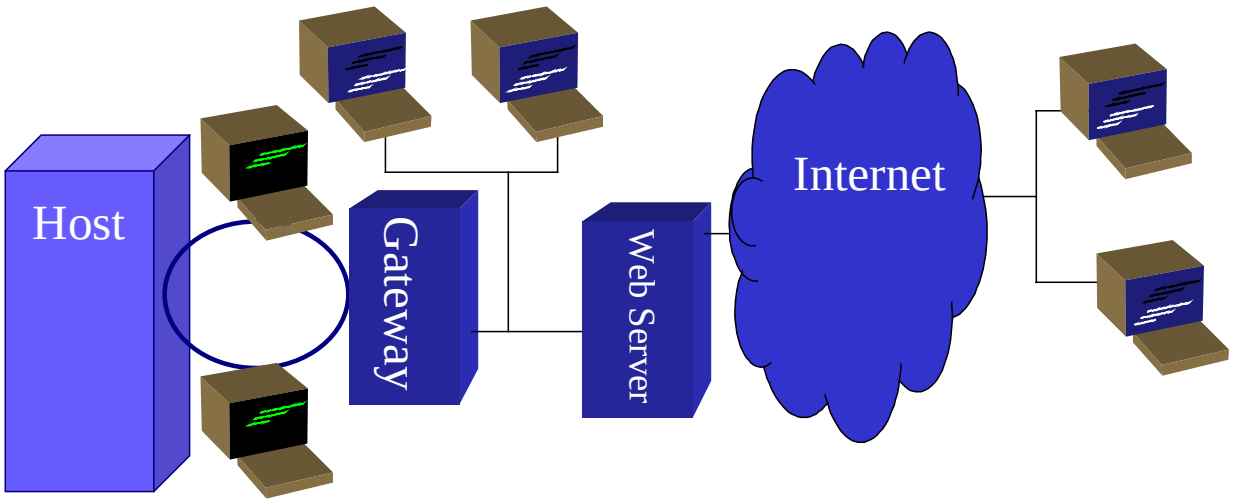
Introduction

OC://WebConnect is client-server based software that provides browser based emulations to 3270, 5250 and VT data streams. In 1996, OpenConnect created the Web-to-Host market by introducing it's premier connectivity software, **OC://WebConnect**, to provide a secure software connectivity link that enables browser-based access to information residing on mainframe and other host computer systems.

OpenConnect's Web-to-Host technology is covered by U.S. Patent No. 5,754,830, which enables an SNA-style persistent connection to host applications over the Internet. This allows traditional information sources over corporate intranets to be shared with business-to-business extranets created from Internet technology. Mainframe and other client server host applications can be easily enabled for Web-to-Host access, without changing a single line of source code. Once enabled, the user can access commercial information through a Web Browser.

OC://WebConnect Architecture



With employees, customers, suppliers, and partners spread throughout the world, enterprises **NEED** to provide mainframe access to all users across the Internet, intranet, or extranet.

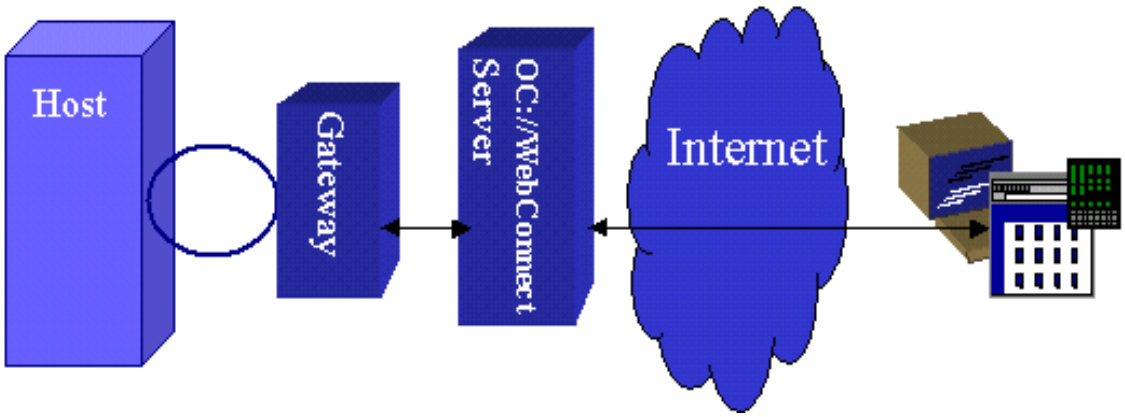
Without OC://WebConnect:

- Client machines need special software/hardware to make a connection to a host's telnet port.
- This solution requires client machines to be maintained or configured increasing the burden on support and I.T. staff.

With OC://WebConnect:

- Software is centrally located on a server or group of servers
- Only software required on the Client is a browser

Communication Flow with OC://WebConnect "Web-to-Host" software



1. With **OC://WebConnect**, a user connects his machine to the Internet…
2. Then requests the **OC://WebConnect** resource…
3. **OC://WebConnect** responds with a selection of available host connections for that user…
4. The user selects a host session icon, which will submit an "applet request" to **OC://WebConnect** …
5. The **OC://WebConnect** applet is pushed into the clients browser where a socket to socket connection is established…
6. **OC://WebConnect** then establishes a connection to the gateway and connects to an LU for the user…
7. A persistent socket to socket connection is then established with the client machine and the emulation session is started.

OC://WebConnect Features

As a full-featured emulation package, **OC://WebConnect** provides all the functionality of a fat-client emulation software, in addition to the most secure web-based access possible.

OC://WebConnect's features include:

Supported Server Platforms

- Windows NT, 2000
- UNIX

- AIX
- HP
- Solaris
- LINUX/390/zSeries

Supported Client Platforms

- OS/2
- MAC
- UNIX
- Windows

Host-Server Support

- Direct Host Connection (SSL)
  - IBM Mainframe
  - IBM AS/400
- Proxy Host Connection
  - UNIX

Web Server Support

- Apache Web Server
- Microsoft IIS
- Netscape Enterprise Server
- Self-Contained Server

Client Browser Support

- Internet Explorer
- Netscape Navigator

Emulation Support

- 3270 Terminal Emulation
- 3287 Printer Emulation
- 5250 Terminal Emulation
- 3812 Printer Emulation
- VT100 Emulation
- VT220 Emulation

Host Emulation Client Type

- AutoVista 3270 to Java Applet “on-the-fly”
- Java Applet
- Java Application
- Surf 3270 to HTML “on-the-fly”

Management and Administration

- Centralized LDAP
- Centralized Monitoring
- Customized TCP Ports
- Extended Logging
- Management Reports
- Session Security (SSL)
- Support for Host Groups

Emulation Features

- Application Programming Interface (Jhllapi)
- Copy, Cut and Paste (Block)
- Custom Screen Colors Support
- Dynamic Emulation Resizing
- Graphical Emulation
- Keyboard Mapping Support
- Macro Support
- Print Screen

Third Party Proxy Server Support

- Client Side
- Server Side

Security

- Authentication
- HTTP(s) Tunneling
- RSA Clear Trust certify
- Single-Sign-On to Mainframe Environment (RACF, Top Secret and ACF2)
- SSL 3.0 up to 128 bit encryption
- SSL with Server Authentication or Server and Tivoli Access Manager Server certified

Other

- File Transfer via IND$FILE
- Applet Menu Item Configuration
- Associated Print
- Certificate Wizard for Managing Client/Server
- Client Authentication
- Enhanced Keyboard Remapping
- Firewall Support
- Java Applet Size 240+ Load on Demand
- LDAP Server Support

- Load balancing of Telnet Sessions
- Multiple Client Support for Various Configurations
- National Language Support
- Protocol Compression
- Scalability (Sessions per server instance)
- Server Based Management of User Configurations
- Single Service Manager Port
- Supports distributed Environment separated from Web Server
- Telnet-negotiated Security
- Usage (license) Management
- Multiple instances per platform (Windows = 3000, UNIX = 5000)

Security

Security is a must for enterprises conducting business over the Internet. **OC://WebConnect** provides security at all stages of the process, from the Client to the Server and from the Server to the Host. In additional, several, optional security features allow administrators to define a user-base and limit access by functionality.

OC://WebConnect security features include:

Session Security

For each Defined Host Session you can:

- Define Security between client and **OC://WebConnect** Server
- Define Security between **OC://WebConnect** Server and Host
- Define session limits

Global Security

- Built-in encryption at up to 128-bit strength
- SSL X.509 certificate authentication
- Specify invalid logon attempts

OC://WebConnect utilizes four different communication ports:

- The use of ports and TCP/IP masks forms a base security layer

- Splitting encrypted and non-encrypted traffic allows administrators to restrict certain assets to encrypted-only access

User Security

Level 0:

- By default, out of the box, all defined host sessions are available to any user who can access the **OC://WebConnect** server.

Level 1:

- Require User Authentication
  - Define Users or Retrieve Users from LDAP
  - Once authenticated, all defined host sessions are available to any valid user

Level 2:

- Limit User Sessions
  - Define specific host sessions for each user

Level 3:

- Access Control
  - Create Groups and Rules
    - Groups consist of one or more users
    - Groups are controlled by a Rule
    - Rules define what you can access, how much, how long and when

Single Sign-On

Single Sign-On facilitates the automation of host application sign-on, by allowing users to login once to the **OC://WebConnect** server or 3rd party web server, then access their host applications with a single mouse-click. The host user ids and passwords are stored on the **OC://WebConnect** server, eliminating security issues arising from desktop stored login information. See OpenConnect's Whitepaper "*OC://WebConnect Single Sign-On*" for a full discussion of this feature.

What's New?

OC://WebConnect 6.2, OpenConnect's latest version of it's award-winning software offers a long list of new features, including:

Licensing

- All Licensing through Network License Manager
- Component Licensing
  - Client (Java Applet or HTML)
  - Emulation (3720, 3287, 5250, 3812, VT)
  - Single Sign-On
- Enhanced 390 Licensing to support SSO Licensing

Client Enhancements

- Browser Support for MAC, NS & IE
- Allow User to save the "Auto Fit" setting
- Enhanced Cut & Past capabilities
- Enhanced Macro feature by adding it to the Toolbar
- Cross-Hair Cursor Functionality
- Mark Screen Text using Keyboard
- Multiple File Transfers
- Added Time/Date Stamp to Print Screen

Administration Enhancements

- Auto Refresh of certain Admininistration HTML Pages
- 3287 Timeout Configuration Option
- Added Option to Preference Menu to Lock Backspace Key
- Added Statistics for Server Session User Load
- Incorporated Manual Admin Authenticate Logons
- Added HTML interface to Admininistration Interface

Server/Installation Enhancements

- Added Option NOT to Install Default Files
- Provided SUID to have the Server start as Root
- Added Applet Version # to Java Console Output

- Forced HTTPs Tunneling
- Enhanced Install to Create a Service on Upgrade
- Added Euro SingleByte Support

Single Sign-On Enhancements

- Allowed SSO to Generate Random Passwords

HTML Client Enhancements

- Virtual Server
- Input Field Validation
- 3287 Associate Print

Technical Specifications

OC://WebConnect Server

- Operating System
  - AIX 4.1.4+
  - HP-UX 10.10+
  - SOLARIS 2.5+
  - LINUX (RedHat 6.2)
  - Windows NT 4.0 w/minimum of SP/6 (for Y2K)
  - WINDOWS 2000
  - AS400 - OS400 V4R1
- 135 MB hard disk
- Memory Utilization
  - Minimum 64 MB of RAM available for platforms to run 1000 concurrent users, each with one host session.
  - Add 36 MB RAM for every additional 1000 concurrent host sessions.

- Session Limitations
  - UNIX - Maximum 5000 host sessions
  - WinNT and WINDOWS 2000 - Maximum 3000 host sessions
    - Minimum 400 MHz processor for 3000 host sessions
      - Microsoft recommends 128-MB memory, 256 MB for WINDOWS 2000

Client Platform requirements

- CPU – Minimum 200 MHz, 300+ recommended
- RAM – 32 MB for WIN, 64 MB for NT, 128 MB for WINDOWS 2000
- OS – Y2K compliant Intel

Browser Requirements

- Netscape Navigator v 4.08+
- Microsoft Internet Explorer 4.0 w/JVM Build 2436 or
- Microsoft Internet Explorer 5.0 w/JVM Build 3167

Summary

OC://WebConnect provides a secure software connectivity link that enables browser-based access to information residing on mainframe and other host computer systems.

End-users of mission-critical applications receive these four benefits when moving to a Web-based solution:

- Increased productivity

  Several traditional 32bit host access products are reportedly slower than 16bit Windows predecessors. This is partially due to the large complex nature of these solutions. It's difficult to expect high performance from a product that needs 35-45 megabytes of hard drive space for simple host access. OC:/WebConnect's client portion ranges from 220K to 450K in size; almost 100 times smaller than traditional emulation products, or other similar competitor's type products. Due to the optimized Web-based clients, performance is noticeably increased. Reducing the amount of traffic on the network increases response time and optimizes performance.

- Improved performance

  Since the access device is a Web browser, users have reduced the complexity of applications on the desktop. Centralized configuration gives administrator's management of setting up the required parameters.

- Equivalent functionality

  Users are not forced to sacrifice functionality when moving to a Web-based interface. In face, they gain additional functions like SSL 3.0, 128 bit encryption, HTTPS, and/or compression capabilities, to once again reduce infrastructure costs.

- Variety of client interfaces

  - **OC://WebConnect** offers four client options to present to your user:
  - Java Applet

- 3270/5250 to HTML-based Emulation
- Graphical interface (via AutoVista)
- Graphical Java Objects (via eXtremeVista)

With **OC://WebConnect**

- Use your Web-browser as the access device
- Reduce the complexity of your desktops while adding security
- Limit the number of things that could go wrong
- Have a new graphical Web interface to existing mission-critical applications

Contact Information

For more information about **OC://WebConnect** or any of OpenConnect Systems' award-winning software, please contact:

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