

Redlined Changes to Minimums and Versions from 1.4 to 1.5

- **Page 20 - GISB EDM Manual 1.4 (Specified TCP Ports)**

TCP Communications

GISB Principle 4.1.37 and GISB Standard 4.3.70 restrict the TCP ports used as a standard for EDM communications. The usage of GISB standard ports may require modifications in the client-side firewall to allow for communications with the various service providers' EDM* implementations. Upon request, the TSP should indicate to their trading partners which specific TCP ports they will require to be opened to conduct electronic communication.

Allowable TCP Ports (not UDP ports)

HTTP 80, 5713, 6112, 6304, 6874, 7403

SSL 443

ICA® 1494

RMI(Java®) 1099-1100

Java® Telnet 31415

TCP Optional 8001-8020**

Allowable UDP Ports (not TCP ports)

Secure ICA 1604

There are other technologies available that would require additional ports to be opened, such as FTP, Telnet, and SMTP. If and when GISB approves such technologies, FTTF will modify this list of allowable ports accordingly. The client-side firewall implementation and client browser settings should permit the downloading and installation of GISB approved plug-ins and modules. Please refer to the GISB defined Minimum Technical Characteristics for Accessing Customer Activities Web Sites for the listing of GISB approved plug-ins and modules.

These guidelines will be reviewed and updated by the Future Technology Task Force, at a minimum, by the spring of each year and presented to the GISB Executive Committee for adoption by the June meeting of that group.

*All GISB standard Internet communications

**The reservation of 20 optional ports was to provide room for implementations such as DCE, IIOP, and load balancing implementations. TSPs should endeavor to minimize the usage of these ports.

4.3.59 Providers of Customer Activities Web sites should ensure that the site operates within the guidelines of the "Technical Characteristics of the Client Workstation" described in the Appendix of the Electronic Delivery Mechanism Related Standards Manual. This appendix, listing examples of hardware and software configurations that providers should meet, should be reviewed and updated by the Future Technology Task Force, at a minimum, by the spring of each year and presented to the GISB Executive Committee for adoption by the June meeting of that committee.

- **Page 63 - GISB EDM Manual 1.4 (Specified HTTP Ports)**

Redlined Changes to Minimums and Versions from 1.4 to 1.5**Server Specifications**

The HTTP Server should be configured as port 80. If port 80 is not available, use one of the five recommended alternate ports: 5713, 6112, 6304, 6874, 7403.

- **Page 22, 68 - GISB EDM Manual 1.4 (PGP Version)**

Security

Though many decisions as to overall security measures are left to each trading partner and their environment, several security measures were established as standards to ensure a minimum level of confidence in conducting business over the Internet and to provide some uniformity in the implementation of security. Four primary security aspects were considered as vital in providing the level of protection of transactions needed for gas industry commerce: data privacy, data integrity, authentication, and non-repudiation. The FTTF found that these concerns are addressed by the use of encryption and digital signature capability of the Pretty Good Privacy (PGP) security application. Any process used for encryption and decryption compatible with PGP 2.6 (using keys generated with the RSA algorithm) meets the minimum standard to be applied to files transmitted over the Internet. To prevent unwanted intruders from connecting to the Web sites, basic authentication is the required standard. Additional issues such as firewall security are discussed in the standards, but are considered implementation issues to be addressed by each organization.

4.3.15 Trading partners should implement all security features (secure authentication, integrity, privacy, and non-repudiation) using a file-based approach via a commercially available implementation of PGP 2.6 or greater (or compatible with PGP 2.6). Trading partners should also implement basic authentication. This should be regarded as an interim solution since this technology is not an open standard. This technology supports all of the above security features while providing independence of choice of Web servers and browsers. Encryption keys should be self-certified and the means of exchange should be specified in the trading partner agreement.

- **Page 22, 68 - GISB EDM Manual 1.4 (HTTP & HTML Version)**

HTTP

The GISB EDM architecture is based on HTTP 1.0, and all implementations should be compatible with this version.

W3C WorldWide Web Consortium. All aspects of HTTP, HTML, and other Web-related topics are documented at:

<http://www.w3.org/pub/WWW/>

General information regarding HTTP with basic terminology included are documented at: <http://www.w3.org/pub/WWW/Protocols/HTTP/1.0/spec.html>

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Syntax information for multipart can be found in IETF RFC1341 section 7.2.

(www.ietf.org)

HTML

Before April 24, 1998, the recommended standard from the WorldWide Web Consortium was HTML 3.2. The specification for this standard can be found at:

<http://www.w3.org/pub/WWW/TR/REC-html32.html>

Effective April 24, 1998, the WorldWide Web Consortium has made a recommendation for HTML 4.0. Information on HTML 4.0 may be found at <http://www.w3.org/TR/REC-html40/>.

<http://www.ncsa.uiuc.edu/General/Internet/WWW/HTMLPrimer.html>

<http://www.interlink-2000.com/guide-to-publishing-html.html>

Special Edition Using HTML, Second Edition, Mark Brown, John Jung, and Tom Savola, Que Corporation, 1996.

- **Page 104 - GISB EDM Manual 1.4 (Appendix C Minimum (11/15/1999) Technical Characteristics and Guidelines for the Customer Activities Web Site)**

Browser Characteristics (includes defined GISB current versions):

Features as supported by the latest generally available (GA) versions of both Netscape® ~~v4.06~~ and Internet Explorer® ~~v4.0 Service Pack 1~~. ³
within 6 months of such GA version becoming available, including –

- Frames & Nested Frames
- Tables & Nested Tables
- HTML
- Cookies
- JavaScript
- SSL 40-bit RSA Encryption
- Style Sheets

Plug-ins (Generally Available (GA) versions within 12 months of such GA versions becoming available)

- JAVA® ~~1.1.6 Sun® JDK~~ ⁴
- ActiveX® (Plug-in for Netscape®) ⁵
- Independent Computer Architecture ~~v4~~ (ICA®) - Protocol used for remote control access to an application

Operating Systems:

Operating systems on a client workstation should be multithreaded and preemptive.

FTTF

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Hardware:

CPU >=~~166~~300 MHz
Memory >=~~64~~96 MB Physical
Display Resolution >=~~800 x 600~~1024 x 768
Connection > =56 KB (v.90)

Example Configuration 1

Hardware: CPU: ~~P166~~P300 MHz or higher
Memory: ~~64MB~~96MB Physical
Display Resolution: ~~800x600~~1024 x 768
Pointing Device with left and right click capability

Operating Systems: ~~Windows® 95~~2
Windows® 98~~2~~
Windows® NT 4.0 ~~service pack 3~~
Windows® 2000

Connection: 56KB (v.90) modem
ISDN
Direct Connect (T1, Fractional T1, etc.)
DSL
Cable-Modem

Browser: Netscape® Communicator/Navigator ~~v4.06~~
Microsoft® Internet Explorer ~~v4.0 service pack 1~~

Plug-ins: JAVA® ~~1.1.6~~ Sun® JDK (Activator)
ActiveX® (Plug-in for Netscape®)
ICA® ~~v4~~

Memory - Users who want to have multiple applications or EBBs open simultaneously should consider more memory.

CPU Speed - Users should be aware that higher CPU speeds may result in better performance.

- **Page 106 - GISB EDM Manual 1.4 (Minimal and Suggested (7/31/98) Technical Characteristics and Guidelines for the Developer and User of the Informational Postings Web Site)**

User technical characteristics provide specifications to the developer on the user environment for which the application will be designed and tested. Likewise, they will serve as guidelines to the user when purchasing the appropriate hardware and software to enable him/her to use the application.

Informational Postings Web Site User Technical Characteristics

	Minimal	Suggested (7/31/98)
Connection	28.8 KB	Direct Connect
Device:		

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Operating System:	Multi-threaded & Preemptive	
RAM:	32 MB	>32 MB
Browser Capabilities:	Cookies & JavaScript Frames & Nested Frames Tables & Nested Tables HTML 3.2	
Display Resolution:	800x600, 256 colors	16k colors

Definitions:*Minimal user technical characteristics –*

The environment and components for which the Web site application is designed and tested. This should include:

- a client environment comprised only of characteristics listed above, and,
- support for all mandated functions in accessing Informational Postings

Suggested user technical characteristics –

Environment or components not required to perform all mandated functions in accessing Informational Postings, but could provide an enhanced user experience.

Examples of User Workstations Meeting Criteria of Informational Postings Web Site User Characteristics¹

Hardware:	Minimal Pentium® 90MHz or equivalent	Suggested (7/31/98) Pentium® 200MHz or greater ²
RAM:	32 MB	> 32 MB
Communication Device:	28.8	Direct Connect ISDN Satellite 56 KB modem <u>DSL</u> <u>Cable-Modem</u>
Monitor:	12" Laptop 15" Desktop	> 12" Laptop > 15" Desktop
Display Capabilities:	800 x 600 256 colors	> 800 x 600 > 256 colors
Operating System:	Windows® 95 System 7®	Windows® 95 Windows® NT 4.0 or greater ³

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	Solaris® 2.5	Solaris® 2.6 4 System 8® <u>Windows 2000®</u>	
Browser:	Microsoft Internet Explorer® 3.02 Netscape® Navigator 3.0 <u>Communicator</u>	Microsoft Internet Explorer® 4.0 Netscape® Communicator 4.0 or Netscape® Navigator 4.0	

Informational Postings Web Site Developer Technical Characteristics

User's environment supporting the above minimum characteristics should be able to access all GISB standardized features of Informational Postings Web Sites.

Any other Web technologies may be considered for use by the developer as long as they can be used by the client without requiring special actions including firewall rule changes, use of a specific browser, logons and downloads of special helper applications such as plug-ins, viewers or readers.