Port 80 is a well-known port used for unencrypted web traffic and is associated with the Hypertext Transfer Protocol (HTTP). HTTP is the foundation of the World Wide Web and is responsible for the communication between web servers and web browsers.

When a user enters a URL (Uniform Resource Locator) into a web browser, such as "http://www.example.com," the browser initiates an HTTP request to the web server on port 80. The server processes the request and sends back an HTTP response containing the requested web page or other resources.

HTTP is a protocol used for communication between a client (such as a web browser) and a server. When a user requests a web resource, the client sends an HTTP request to the server, specifying the method (e.g., GET, POST), the resource URL, and optional data. The server processes the request, generates an HTTP response with the requested resource, status code, headers, and sends it back to the client. The client interprets the response, renders the web page, and may trigger additional HTTP requests for referenced resources. This request-response cycle allows users to access and interact with web content.

Here's a breakdown of how port 80 and HTTP work:

Client Request: A user types a URL into their web browser or clicks on a hyperlink, indicating the desired web resource.

HTTP Request: The web browser sends an HTTP request to the server hosting the requested resource. The request includes information like the HTTP method (GET, POST, PUT, DELETE, etc.), the URL path, headers, and optional data.

Server Processing: The web server receives the HTTP request on port 80 and processes it accordingly. It parses the request, determines the requested resource, and performs any necessary processing or database queries.

Resource Retrieval: If the requested resource is a web page, the server retrieves the corresponding HTML file and any additional assets (CSS, JavaScript, images, etc.) associated with the page.

HTTP Response: The server constructs an HTTP response containing the requested resource. The response includes an HTTP status code (e.g., 200 for success, 404 for not found), headers (e.g., content type, cache-control), and the content itself.

Transmission: The server sends the HTTP response back to the client over port 80. The response is typically broken into packets for transmission over the network.

Client Rendering: The web browser receives the HTTP response and processes it. It interprets the HTML, applies styles, executes JavaScript, and renders the web page for the user to view and interact with.

It's important to note that while port 80 is the default port for HTTP, it is also possible to run HTTP traffic on alternative ports if configured on the server. Additionally, port 80 typically handles unencrypted traffic. For secure communication over HTTPS, port 443 is used instead, providing encryption and security features.

Although some cybersecurity experts suggest that closing port 80 can help with system protection, others believe that port 80 should be kept open. Proponents of enabling this port point out that it’s helpful in redirecting traffic from HTTP to HTTPS.

They may also ask the planner in question to “think about the browser on the other end” in the sense that the counterparty’s system may not be set up for a closed port 80 calibration.

Also, in terms of cybersecurity, experts may point out that closing port 80 will not stop man in the middle attacks from occurring, or prevent SQL injection and other types of attacks that rely on infiltrating a system through an Internet connection.

Port 80 Connection Problems

In some cases, an ISP may block port 80, making it difficult to get Internet access from a piece of hardware. Another common issue is an error that declares that port 80 is already in use.

In some ways, both these problems have been largely alleviated by the rise of cloud services. To the extent that multiple applications work over an Internet browser, they can all use the same port at once.

For example, Skype was one of the previous culprits for taking port 80 away from other applications. Using Skype through a browser eliminates that type of issue.