

# The lifetime of an incoming socket

1. The *IntellectualServer* collects any incoming requests and sends them to *SocketHandler#acceptSocket*.
2. The *SocketHandler* acts on the incoming socket.
  - a. All active socket filters are applied to the socket, filtering out any unwanted requests.
    - i. If the filter (a predicate) returns a negative result, the socket is immediately shut down through *SocketHandler#breakSocketConnection* **[END]**
  - b. The socket is sent to an available *Worker* through the *ExecutorService* instance. When available *Worker#run* is called.
3. If the socket is active it is handled by *Worker#handle(Socket)*.
  - a. The raw input is read into a list of strings.
  - b. A request is created.
    - i. The protocol type is determined.
    - ii. The input is once again read, in search for requested query and incoming headers.
    - iii. The headers are handled.
    - iv. The query is read, and handled.
    - v. Cookies are read and stored.
    - vi. If authorization is provided, it is read.
  - c. The request is handled by *Worker#handle*.
    - i. The request handler for the request is fetched by *Router#match*, 404 if no appropriate generator is present. **[abstract]**
    - ii. A session is fetched or created (then stored).
    - iii. The request is validated through any given validators.
    - iv. The server checks if a cached response exists for the response:  
**If it does:** The cached response is read through *Server#getCacheManager#getCache(RequestHandler)*  
**If not:** *RequestHandler#handle* is called.
      - i. Middleware is allowed to act on the request.
      - ii. If an alternate outcome, or redirect has been requested, it is handled.
      - iii. The response is generated **[abstract]**
    - v. Cache may be stored now.
    - vi. All handlers are allowed to act on the response.
    - vii. The headers are printed to the remote socket.
    - viii. Output is compressed (if md5 compression is enabled).
    - ix. The data is written to the remote socket, and the output is flushed.
4. The socket is closed **[END]**