

JextLoader acts as a local IPC service to launch or terminate Jext editor instances within one JVM. It generates a randomized port and authorization key, writes them to a file, then listens on a ServerSocket. On each connection, it verifies the client's origin and message before invoking Jext APIs.

- **Port & Key Generation**

- Selects a random port in the range 0–16382.
- Generates a 30-bit random authorization key.
- Persists both values into an `.auth-key` file.

- **Connection Loop**

- Continuously accepts incoming socket connections.
- Validates client IP (`127.0.0.1`) to enforce localhost-only access.
- Reads a single-line command, then closes the reader immediately.

- **Command Parsing**

- Recognizes two message formats:
 - `load_jext:<args>?...:<key>` to open files or windows.
 - `kill:<key>` to request application shutdown.
- Uses `StringTokenizer` on the substring between prefix and key to extract load arguments.

- **Instance Dispatch**

- If `jextLoader.newWindow` is true, always launches a fresh window.
- Otherwise, reuses the first open `JextFrame` to open files.
- On kill requests, checks background mode and visible windows before cleanup and exit.

- **Fields**

- `int port` & `String key` : govern socket address and authorization.
- `File auth` : points to the `.auth-key` file on disk.
- `ServerSocket server` : listens for local commands.
- `Thread tServer` : drives the asynchronous accept loop.

- **State Transitions**

- i. **Initialization:** constructor writes auth file, opens ServerSocket, starts `tServer`.
- ii. **Serving:** `run()` loops until `tServer` is null, handling valid or intruding connections.
- iii. **Shutdown:** `stop()` interrupts the thread, closes the socket, deletes the auth file.

Method	Purpose	Key Parameters	Return Value
<code>JextLoader()</code>	Generate auth key/file, bind ServerSocket, start thread.	none	— (constructor)
<code>stop()</code>	Halt listener thread, close socket, delete auth file.	none	<code>void</code>
<code>run()</code>	Main loop: accept connections, validate, dispatch actions.	none	<code>void</code>

- **Swallowed Exceptions:** Many `catch(IOException)` blocks lack logging or remediation.
- **Hardcoded Boundaries:** Uses `127.0.0.1` and fixed port offset without configuration.

- **Thread Safety:** Volatile mutation of `tServer` without synchronization.
- **Deprecated Patterns:** Reliance on `Vector` and `StringTokenizer` in modern Java.
- **UI in Service:** Invoking `JOptionPane` in headless environments risks deadlocks.
- **Security Exposure:** Auth file stored with no file-permission checks; key in cleartext.