Awakair Messages Protocol Specification

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v1.0

Contents

When I should use this protocol?

Simple answer: you should **NOT** use this protocol.

It's invented to improve my skills in programming.
I want to make something new using TCP protocol and sockets,
maybe add some new projects to my resume.

Structure

1. Message sent via TCP protocol
2. Message sent in big-endian format
3. Message contains header:
   - 3.1. First two bytes set to `0h414D` (AM in ASCII - Awakair Messages)
   - 3.2. Next byte set to `0h01` (protocol version)
   - 3.3. Next four bytes represent length of message in bytes
   - 3.4. Next byte represent type of message (see Types of message section)
4. Optional body goes after header
5. Message does not contains footer

Types of messages

Currently supported types for messages are

1. Service message - `0h01`
   First byte of bode sets to service message code, at the moment we have two supported codes

   1.1. `0h00`, which we can send if there was an error due to parsing message

   1.2. `0h01`, which we can send if message has unsupported protocol version

   Next goes optional description encoded in ASCII

2. Text message - `0h02`
   Body is text encoded in ASCII

Examples

1. Correct service message may look like

   1.1. `0h414d` - magic bytes

   1.2. `0h01` - protocol version

   1.3. `0h52` - 82 bytes in body

   1.4. `0h01` - service message

   1.5. `0h01` - unsupported protocol version

   1.6. `Message has unsupported protocol version, last supported protocol version is v1.0` - optional description

   To summarize we have 0h414d015201014D6573736167652068617320756E737570706F727465642070726F746F636F6C2076657273696F6E2C206C61737420737570706F727465642070726F746F636F6C2076657273696F6E2069732076312E30

2. Correct text message may look like

   2.1. `0h414d` - magic bytes

   2.2. `0h01` - protocol version

   2.3. `0h13` - 19 bytes in body

   2.4. `0h02` - text message

   2.5. `Hello, how are you?` - message text

   To summarize we have 0h414d01130248656C6C6F2C20686F772061726520796F753F