

## 4 Header

### Overview

Header is present in response and request messages between Zabbix components. It is required to determine the length of message. The header consists of:

```
<PROTOCOL> - "ZBXD" (4 bytes).
<FLAGS> - the protocol flags, (1 byte). 0x01 - Zabbix communications
protocol, 0x02 - compression).
<DATALEN> - data length (4 bytes). 1 will be formatted as 01/00/00/00 (four
bytes, 32 bit number in little-endian format).
<RESERVED> - reserved for protocol extensions (4 bytes).
```

When compression is enabled (0x02 flag) the <RESERVED> bytes contains uncompressed data size, 32 bit number in little-endian format.

To not exhaust memory (potentially) Zabbix protocol is limited to accept only 128MB in one connection.

### Implementation

Here are code snippets showing how to add Zabbix protocol header to the data you *want* to send in order to obtain packet you *should* send to Zabbix so it is interpreted correctly.

Language	Code
bash	<pre>printf -v LENGTH '%016x' "\${#DATA}" PACK="" for (( i=14; i&gt;=0; i-=2 )); do PACK="\$PACK\\x\${LENGTH:\$i:2}"; done printf "ZBXD\\1\$PACK%s" "\$DATA"</pre>
Java	<pre>byte[] header = new byte[] {     'Z', 'B', 'X', 'D', '\\1',     (byte)(data.length &amp; 0xFF),     (byte)((data.length &gt;&gt; 8) &amp; 0xFF),     (byte)((data.length &gt;&gt; 16) &amp; 0xFF),     (byte)((data.length &gt;&gt; 24) &amp; 0xFF),     '\\0', '\\0', '\\0', '\\0'};  byte[] packet = new byte[header.length + data.length]; System.arraycopy(header, 0, packet, 0, header.length); System.arraycopy(data, 0, packet, header.length, data.length);</pre>
PHP	<pre>\$packet = "ZBXD\\1" . pack('P', strlen(\$data)) . \$data; or \$packet = "ZBXD\\1" . pack('V', strlen(\$data)) . "\\0\\0\\0\\0" . \$data;</pre>
Perl	<pre>my \$packet = "ZBXD\\1" . pack('&lt;Q', length(\$data)) . \$data; or my \$packet = "ZBXD\\1" . pack('V', length(\$data)) . "\\0\\0\\0\\0" . \$data;</pre>
Python	<pre>packet = "ZBXD\\1" + struct.pack('&lt;Q', len(data)) + data</pre>

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