

Common message protocols

ZMQ transport message format for request and response

The ZMQ message used with three string field structure:

1. **Id** – unique identifier used to detect response to request correspondence. Typically the crc32, md5 or another way generated string.
2. **Body** – the message body, typically is the message body cover object json.
3. **Route** – the route object json; optional field can be omitted.

The message body cover object json

Json format of message cover object for network node transport level:

```
{
  "type": <message_type>,
  "data": [{<message_body>}],
  "ttl": <message_ttl>
}
```

message_type – numeric integer{0, 1, 2, 3, 4};
0- Null handler (default for not supported or error cases), 1 – Sphinx, 2 – DRCE, 3 – Sqlite, 4 – Mysql
message_body – json data different for each message type, base64encoded
message_ttl – message TTL for network transport level.

Base64encoded* – for possibility to use base64 code/encode depending on make/project name declaration `JSON_USE_BASE64=1`.

The route object json

Json format of route object for network node transport level:

```
{
  "role": <manager_role>,
  "nodes": [ "<node_name1>", "<node_name2>", ... ]
}
```

role – numeric integer{0 – shard manager, 1 – rmanager-round-robin, 4 – rmanager-rnd, 5 – rmanager-resource-usage}. If value is not in range current node role will be used.
nodes – array of strings of nodes names. If array is empty – list of nodes to send request message defined depends on role.

Appendix 1.

Error codes and explanation for message body cover object:

Code	Description
0	No errors - return successful without errors
1	Internal error json serialize
2	Internal error json unserialize