

# Interaction with backend server

Client application can connect to WCS OAM backend server to receive metrics data and to manage data acquisition by two ways:

- using Websocket API
- using REST API

## Interaction using Websocket API

To get WCS stream information in realtime and to manage WCS monitoring, [STOMP](#) based Websocket API can be used

### Connecting to backend server via STOMP over Websocket

To connect to backend server, do the following:

1. Establish Secure Websocket connection to `https://hostname:8090/ws`, where `hostname` is backend server host name
2. Establish STOMP connection by sending the message

```
CONNECT
accept-version:1.2
host:hostname

^@
```

3. Subscribe to `/alarms` queue for [alarms receiving](#) by sending the message

```
SUBSCRIBE
id:sub-0
destination:/alarm

^@
```

4. Subscribe to `/user/service` queue to receive responses to requests by sending the message

```
SUBSCRIBE
id:sub-1
destination:/user/service
```

^@

## Requests sending and responses receiving

Requests should be sent as STOMP messages, for example

```
SEND
destination:/app/api/metric/list
content-length:100

{"requestId":"eb2c2807-8c2f-4418-aebe-03622404e4bb","realm":"/api/metric/list","payload":{"id":"3"}}^@
```

Where:

- `destination` - request URI
- `content-length` - request body length

Request body is JSON object with the following parameters:

- `requestId` - unique request identifier
- `realm` - request method used
- `payload` - request data depending on method used

Response will be received asynchronously in `/user/service` queue as STOMP message, for example

```
MESSAGE
destination:/user/service
content-type:application/json;charset=UTF-8
subscription:sub-1
message-id:3-8
content-length:159

{"requestId":"eb2c2807-8c2f-4418-aebe-03622404e4bb","status":200,"reason":"SUCCESS","payload":[{"id":3,"name":"Video rate","note":"","enumName":"VIDEO_RATE"}]}^@
```

Where:

- `destination` - queue URI
- `content-type` - content type (always `application/json`)
- `subscription` - subscription identifier
- `message-id` - message identifier
- `content-length` - response body length

Response body is JSON object with the following parameters:

- `requestId` - unique request identifier
- `status` - standard HTTP response status
- `reason` - response reason phrase
- `payload` - response data depending on request data and response status

## Interaction using REST API

To receive WCS stream information and to manage WCS monitoring, REST API can be used

REST query should be `HTTPS POST` request as follows:

- `https://wcoam.flashphoner.com:8090/api/stream/history`

Здесь:

- `wcoam.flashphoner.com` - backend server address
- `8090` - HTTPS port
- `/api/stream/history` - REST method used

## Connection setup

### Port configuration

HTTPS port to handle REST queries and WSS connections can be set with the following parameter in `wcoam.properties` file

```
server.port = 8090
```

### Websocket connection timeout configuration

Websocket connection timeout is set with the following parameter in `wcoam.properties` file

```
stomp_max_timeout=1000
```

### CORS configuration

Cross-domain requests should be allowed to establish connection from browser with the following parameter in `wcoam.properties` file

```
access_control_allow_origin=*
```

